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Address

THE DISCHARGE OF SEWAGE INTO TIDAL WATERS *

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The necessity for taking steps to protect the sanitary condition of tidal waters arises chiefly from the plan, now almost universally followed, of employing water to carry off, through sewers, the excrement of the inhabitants of cities.

Originally intended for storm water only, sewers began to be extensively used for the water carriage of excrement about sixty years ago. At that time, and for years afterward, it was not anticipated that the capacity of rivers and harbors for sewage could be exceeded; the only problem seemed to be how to get the offensive material away from the houses and streets of cities and into natural bodies of water with the least inconvenience and expence.

With the progress of time and the growth of cities the amount of sewage disposed of in this manner has enormously increased. Rivers which once furnished wholesome supplies of drinking water and were a source of pleasure and health have become infested with disease germs and have produced some of the most intense epidemics of modern times. Some streams and tidal estuaries have become so overloaded with filth as to give rise to odors of great offensiveness and extent. In such cases fish life is impossible. The water is blackened and putrid. The paint of ships and buildings is discolored and bubbles of foul gases arise from the liquid, giving it the appearance of effervescence. This is the extremity of sewage pollution, but cases of it are not, unfortunately, difficult to find. The river Thames was in this condition between 1848 and 1855 and again in 1875. The river Seine below Paris is in a similar condition now. The Chicago River, the Buffalo River and the Passaic River are familiar examples in America. Many tidal harbors where sewage is disposed of in quantity are capable of affording an object-lesson of the unpleasant consequences which follow when the capacity of water is overtaxed.

EXAMPLES OF PROTECTED HARBORS

There are several cities in Europe and America which have found it necessary to protect their tidal waters against excessive sewage pollution. This is usually done by the construction of public works to divert and purify the sewage. London partly purifies its sewage with chemicals and ships to sea 7,500 tons of the resulting sludge each day. The city of Glasgow treats its sewage in the same way. Dublin, Belfast and Hamburg all protect their harbors against excessive sewage pollution by public works which have cost large sums of money. In the United States the city of Boston and many municipalities in its vicinity have combined to carry their sewage far out into the harbor in order to prevent excessive pollution near the shores. The city of Providence purifies its sewage after the London principle. Baltimore, the latest American city to adopt a scheme of harbor protection, is constructing an elaborate system of sewage purification, including sedimentation, filtration and probably disinfection.

New York is the largest seaport which has no definite plan or policy with respect to sewage disposal. The liquid wastes of over 6,000,000 people are discharged into New York harbor without any purification or regulation whatever.

Not only are the waters of many of the greatest seaports protected from excessive sewage pollution, but works for purifying sewage or, at least, diverting it from points where it would become a nuisance, are becoming increasingly common for inland cities. Of the twenty-six cities of Europe and America which have populations of over 500,000, about one-half purify their sewage or follow some other carefully devised plan for disposing of it. Of the nine cities of 1,900,000 inhabitants or more, three purify their sewage; one carries it to a distance by an especially built canal and the remainder discharge their sewage into great bodies of water without any plan or concern as to its ultimate fate. Accurate statistics are not available to show how large is the aggregate sum of money invested in all the sewage disposal plants which exist, but some idea of the magnitude of these undertakings can be had from the fact that there are works for the purification of the sewage of not less than 18,000,000 people.

THE SELF-PURIFICATION OF HARBORS

The capacity of a harbor for assimilating sewage without offense varies according to its size and shape and situation with reference to the tidal currents which flow to and from the ocean.

In most harbors there is an oscillation of the main currents which causes floating matter to be carried back and forth on the same path, sometimes for many miles at each tide, before escaping to sea. In the port of London the tidal oscillation often has a range of ten miles or more. It has repeatedly been proved that it takes from twenty-five to seventy days for water to pass from the upper end of London to the North Sea by this course. In Dublin harbor, on the other hand, there are seaward-moving currents which carry the sewage away from the shore toward the Irish Sea at practically all stages of tide. In most instances the oscillating currents have a net seaward gain. This gain results from

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land water which flows into the harbor from streams near its head.

The sewage of some cities, as Boston and Hamburg, for example, is stored in reservoirs and discharged only on outgoing tides. When sewage is discharged on a rising tide the offensive matters are not only apt to be carried toward the land, but they are likely to be deposited on the shores. This is particularly true in long and narrow harbors. As is well understood by rivermen, rising stages of the water carry floating things ashore, falling stages draw them to the middle of streams.

The harbor of New York is peculiar in that it has two ocean entrances. At these entrances the tidal periods are different, high water occurring a little later at Hell Gate than at the Narrows. Owing to this difference, there seems to be a movement of sea water from Long Island Sound through the East River and upper bay southward through the Narrows in excess of the water which flows in the opposite direction. This excess may be very slight, but there is reason to believe that it exists. It is most important to be sure about this matter, for it may be that this harbor has been endowed by Nature with an automatic flushing arrangement which can be turned to good account in keeping the harbor clean. This subject is now being studied by the Metropolitan Sewerage Commission, and a full report on it may be expected within about one year.

In nearly all harbors there are places where the water does not circulate in such a way as to produce a sufficient flushing action, and under these circumstances trouble from sewage pollution often occurs. No better illustration of such conditions can be afforded than those which occur in some parts of the harbor of New York. The Gowanus Canal, Newtown Creek and Passaic River are notorious examples of arms of tidal harbors which are supersaturated with sewage. How to relieve the inhabitants of such districts of these insanitary surroundings without producing evils which will affect still larger numbers of persons is often a very serious problem.

When sewage is discharged into harbor water it flows away in a stream, which is more or less well defined, depending on the clearness and smoothness of the harbor water. Offensive conditions are often produced before assimilation takes place. These offensive conditions include unpleasant odors, discoloration of the water, the production of a greasy film and the appearance of solid matters, such as feces, paper, matches, corks, fruit and vegetable refuse, bread and similar refuse. Some solid matter is deposited, the sedimentation of solids taking place much more rapidly in sea water than in land water. The deposited solids often putrefy and give off large quantities of offensive gases. It is not uncommon to see the water about the docks of the New York metropolitan area effervescing with gas from the sewage pollution.

On the British coast the location of sewer outfalls is marked by flocks of gulls which feed on the scraps of rotting refuse which the sewage contains. In New York City gulls both feast on the sewage of the harbor and visit the reservoir of drinking water in Central Park.

It has been found by experience and experiment that harbor water has a large capacity for inoffensively assimilating sewage, providing most of the suspended solids are first removed and the sewage is added properly. Money considerations usually make it necessary to take this assimilative capacity very carefully into account. Sanitary experts have given much attention to the question of the self-purification of water, and it is not strange that some believe it to be possible to state with exactness how much sewage a given quantity of water can assimilate.

One of the problems which engineers must consider when planning to discharge sewage into a tidal harbor is how to arrange the outfalls so that the sewage will become promptly mixed with the tidal water. It is important that the point of discharge should not be at the shore line, nor so situated that the currents or wind will bring the sewage to the shore. It is equally plain that no sewage should empty into a part of a harbor where there is not a net seaward discharge capable of carrying the refuse away. Discharge only on outgoing currents is less certainly necessary, but is probably wise policy under many circumstances. Very little is known concerning the effect of submerging the outfall to a depth below the surface of a harbor or dividing the discharging sewage into a number of neighboring streams, although it would seem that whatever tends to aid diffusion in this way would be beneficial. Diffusion is at the very heart of the question of utilizing the digestive power of a harbor for sewage.

THE ARTIFICIAL PURIFICATION OF SEWAGE

Engineers are agreed that there is no insuperable difficulty about purifying sewage, except the cost. It would not be beyond the range of practicability to collect all the sewage of New York and its neighboring municipalities, amounting to, perhaps, 500,000,000 gallons per day, and convert it into a harmless and inoffensive liquid. But the expense of building and maintaining the works necessary to accomplish this purpose would be enormous. Fortunately it is not always necessary to collect and purify all the sewage which is produced in the cities bordering on a tidal harbor, even when careful measures of protection are required—it may be enough to purify the discharge of some of the principal sewers. Similarly the highest degree of purification may not be necessary in every case, but only such improvement may be required as will make the sewage harmless when finally discharged into the tidal waters.

Contrary to general belief, the manurial ingredients of sewage can not be recovered in such a way as materially to reduce the expense of handling it. Theoretically the manurial value of sewage is $1 to $1.25 per capita per year, but there seems to be no city in the world which is handling its sewage at a profit. It is true that some large cities, notably Paris and Berlin, utilize their sewage by irrigating farm land with it, but this requires great areas of territory and is profitable only where the soil is suitable and cheap or the sewage is useful for the water which it contains. Some kinds of land are entirely unsuited for this purpose.

A large part of the manurial ingredients can be extracted by passing the sewage through tanks, in which the solid particles can be made to settle out with or without the aid of chemicals. But this process requires the handling of large volumes of a bulky sludge containing 90 to 95 per cent. water. This sludge can not be utilized without drying or pressing, and these procedures are very expensive. If the sewage of New York were treated by precipitation with chemicals, it is estimated that about 14,000 tons of sludge would be produced each day.

The bacterial processes of purifying sewage which have been developed in the last ten years do not aim to recover the fertilizing ingredients. Their sole object is to dispose of the impurities in a harmless and inoffensive manner and with the least expenditure of time and money. Many of these bacterial processes are of much scientific interest. Considerable progress is being made in improving them. Very novel bacterial works for the disposal of sewage are now being constructed at Belfast, where it is expected that a certain amount of the organic matter will, through the action of microorganisms, be driven into the atmosphere in the form of an inert and harmless gas. It is necessary in this case to keep even the usual mineral ingredients of purified sewage out of the harbor as far as practicable, lest they serve as a manure for the excessively luxuriant growth of sea lettuce which, under present conditions, constitute a public nuisance near Belfast.

If sewage is screened and passed through properly constructed settling tanks, the visible particles may all be removed. In connection with this treatment grease may also be extracted from sewage. Screening, settling and grease removing are extensively practiced in Germany, when sewage is discharged into rivers which are not used for drinking purposes. The cost of this work is comparatively small. The benefit, when regarded from the esthetic standpoint, is large. It is estimated that one ton of grease is produced for about every 125 of the population in the course of a year.

THE DANGEROUS POSSIBILITIES OF SEWAGE

If a sample of sewage is collected in a bottle and kept from the air, anaërobic fermentation sets in and offensive gases are produced. These gases are particularly unpleasant if the sewage is first mixed with a little sea water. Anaërobic fermentation is common in the more stagnant parts of tidal harbors. The gases consist largely of imperfectly oxidized sulphur compounds, sulphuretted hydrogen being the most prominent. These gases are disagreeable and nauseating, but are believed to be incapable of producing any specific infective disease.

If the sample of sewage in the bottle is thoroughly and repeatedly aërated it will not produce offensive odors. The organic matters will gradually decompose, but in this case the decomposition is a slow combustion. Oxygen is absorbed and carbon dioxid is produced. Nitrogen compounds are converted into ammonia and this, becoming oxidized, is transformed into nitrous and nitric acids. These acids immediately unite with the alkaline constituents of the water and become resolved into other harmless and inoffensive mineral substances. This process of decomposition is continually proceeding in Nature on land and in water, whether the organic matter which is being decomposed originates from sewage or from other sources. There is nothing offensive to the sense of smell or dangerous to health in this kind of fermentation. It is the best and only way in which sewage should be assimilated by tidal waters.

The capacity of a sewage-polluted harbor to produce disease depends on the chance that pathogenic microbes are present and that these may pass from the water into the bodies of persons susceptible to the diseases of which these microbes are the product. The sewage of a city like New York is always dangerous, for it contains the germs of every infectious disease which occurs there. To take the polluted water which flows about the docks of New York into the mouth, as do thousands who bathe along the built-up waterfront in summer, is obviously dangerous. Fishing where the hands are continuously wet and may carry sewage matters to the mouth is also attended with some risk. The collection of driftwood for fuel also seems to be unsafe, for in this case the filth-impregnated wood is carried into houses.

Bacteriologists have not yet determined how long the various organisms of disease are able to live in tidal water, but a great deal of interesting work has been done in connection with this subject. The most definite results have been obtained in studying the circumstances under which the germs of typhoid fever may persist. The results have not always been in harmony, and it must be remembered that, at best, laboratory conditions can not always be made to represent accurately the conditions of Nature. But, as far as our information goes, it appears that when typhoid germs are mixed with harbor water a rapid reduction in numbers generally occurs at once. At the end of two or three days only a small percentage of the original number of bacteria are present. At the end of about a week a further slight reduction has occurred. Some survive for two or three weeks, and under exceptional circumstances it would seem that the vitality of typhoid germs might persist for months; evidence is on record to show that they have traveled eighty miles or more from their point of origin.

There is believed to be no reduction in the virulence of typhoid germs because of their existence in water. The most resistant survive, and these are apparently well qualified to multiply and produce typhoid in any susceptible person into whose intestinal tract they are taken. It seems a well-established fact that no pathogenic microbes are capable of multiplying in polluted harbor waters under circumstances which commonly exist.

PROBABLE AMOUNT OF DISEASE PRODUCED BY POLLUTED HARBORS

Contrary to what might be expected, there is little statistical evidence to show that a large amount of sickness is produced by polluted harbors. Repeated attempts to collect such evidence have been made, but without success. When the river Thames at London was giving off its most abominable stenches, prior to the construction of the present sewage disposal system, the vital statistics of the city showed no increase in the prevalence of any disease which the sanitarians of that day could ascribe to the odors. Inquiries into the health of wharfmen and boatmen indicated that their health was not visibly affected. When the river Liffey was being described as the most abominable nuisance in Ireland, efforts were made to ascertain the amount of sickness near the waterfront of Dublin, but no excess of illness could be found.

Much of the argument which for centuries taught that epidemic diseases were produced by vapors arising from ill-smelling substances has been shown by the cold light of modern science to have been founded on imperfectly observed facts. Offensive odors may aggravate, if not predispose to infectious disease, but they do not produce them.[5]

The dictum of to-day is that bad smells should be prevented, because they are smells. What is disgusting and revolting to the sight must be kept from view. The higher standards of decency and order which prevail make it unnecessary to prove that insanitary con-

ditions breed pestilence in order to present sufficient reason to abate them.

Failure to discover an increase in specific disease does not, of course, prove that harm is not done to public health by the existence of insanitary conditions. The methods of inquiry employed in such investigations are too crude to detect the whole extent of the injury even if considerable harm is done. Only the most conspicuous evils, such as cases of specific intestinal diseases, are generally accepted as indicating the extent of the consequences. The more subtile effects, such as those which are produced by insufficient air, food, sunlight, exercise and rest, can not so readily be detected, measured and traced; therefore, when they are recorded against insanitary conditions at all, they are generally attributed to them in such a vague, uncertain way as to fail to convey a proper sense of their importance. That a very real impairment of vigor, and consequently health, may occur among persons who are compelled to dwell among insanitary conditions will be freely admitted by all. Disease aside, this impairment of health means impairment of efficiency in the capacity to do work.

The most convincing proof of a connection between polluted harbors and specific disease lies in the results of eating shell-fish. There have been more than enough cases of typhoid fever and gastroenteritis reliably ascribed to the eating of oysters, clams and other shell-fish derived from polluted waters to show the danger in this direction. Shell-fish taken from sewage-polluted water are polluted themselves. They are likely to cause typhoid fever if eaten raw. Cases have been known to arise merely from handling the shells. The total amount of sickness caused by impure shell-fish is not even approximately known. Only some of the most striking and most obvious cases are likely to be traced.

Within the last five years much attention has been directed to the absence of sanitary jurisdiction over the cultivation and handling of shell-fish, with the result that health authorities and others have been moved to abate some of the most dangerous practices. Improvements in the cultivation of shell-fish have been made in Europe and America, but a great deal remains to be done. In some harbors it would appear that the shell-fish industry must be given up. In others a careful management of the sewage will suffice. In view of the enormous value of the shell-fish industries, which now amount in the United States to over 50 per cent. of the total value of our fisheries, it seems incredible that the oystermen, many of whom are intelligent and of ample means, should be willing to continue to grow and handle their shell-fish in an insanitary manner. One would expect them to be the first to take the necessary steps for the protection of their business.

SANITARY JURISDICTION OVER TIDAL HARBORS

The form of sanitary jurisdiction which should be exercised over a tidal harbor must depend on the local circumstances. Over matters which are certainly of public health import, it is obvious that boards of health should have jurisdiction. Where questions affecting public comfort and well-being are alone concerned, some other form of jurisdiction is, at least, equally appropriate. The main authority in charge of the sanitary protection of the Thames is not a public health body. The various royal commissions on sewage disposal of Great Britain have, with one exception, not been health boards.

The various rivers boards of England, which are doing good work for the sanitary protection of watercourses, are committees composed of local authorities and are charged with the special duty of preventing nuisances. The last report of the (temporary) Royal Commission on Sewage Disposal has recommended the creation of a permanent central authority which shall carry on suitable investigations and be ready to give expert advice to local authorities as to methods for the sanitary disposition of sewage.

In Germany the imperial board of health exercises jurisdiction over the streams only in so far as health is surely concerned. The sanitary improvement and protection of the rivers, so that they may be more suitable for the enjoyment and use of the public, devolve on other authorities.

In America, where there is no central health authority, the protection of the watercourses is left to the care of the individual states. Some states require that all plans for sewerage, as well as sewage purification, shall be passed on by the state board of health before they are carried out. American harbors are protected, where any protection exists, chiefly through works constructed by sanitary authorities, such as sewerage commissions, which have no jurisdiction over the matters of public health. The need and nature of such work are often determined by a special board of commissioners. This has been true of Boston and Baltimore. The preparatory investigation now being made to determine how best to protect the sanitary condition of New York harbor has been placed by the State of New York in the hands of a commission of four engineers and one physician, called the Metropolitan Sewerage Commission. The duties of this body are plainly specified in the act of the legislature which brought it into existence (Chapter 639, Laws of 1906, amended by Chapter 422, Laws of 1908).

17 Battery Place.

Original Articles

THE RESULTS OF DRUG TREATMENT IN FIVE HUNDRED CASES OF DELIRIUM TREMENS

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An attempt has been made in this investigation to determine, as well as may be by statistical methods, the relative value of the various drugs commonly used in the treatment of delirium tremens. The conclusions reached as a result of a careful study of 500 cases may be summarized as follows:

1. In incipient cases the patients respond readily to treatment with chloral, ergot, bromids and whiskey, the drugs being mentioned in the order of their value.

2. Delirious patients are very resistant to treatment. In the cases studied the administration of the sedative drugs increased the mortality. This was most evident when scopolamin was used, that drug increasing the mortality 13 per cent. These unsatisfactory results with the sedative drugs were due to the large doses used. It will be shown that small quantities, for example, 15 to 30 grains of chloral in twenty-four hours,

may be given with good results, but that when larger quantities are given the death rate increases with the amount of sedative administered.

3. The only drug which reduced the mortality was ergot. By its use the death rate was decreased 21.6 per cent.

4. When whiskey was given the mortality was increased 1.8 per cent.

The 500 cases which serve as a basis for this paper are those of patients treated at the Cook County Hospital, Chicago, during a period of three years, extending from June, 1905, to August, 1908. This represents only a part of the total number of such cases in the hospital during that period. The cases developing in the hospital while the patients were under treatment for other conditions are not included in this series, because the histories of these cases were filed in the hospital records under the heading of the original maladies and were not readily accessible. The remaining cases, in which mania a potu was the chief evidence of disease, and whose histories were filed under the head of alcoholism, were the ones utilized in compiling the following statistics. It is believed that the relatively uncomplicated nature of these cases makes them particularly suitable for such a study.

It must not be supposed, however, that these 500 cases presented no complications, but rather that the complications were only of minor importance. The nature and frequency of the complications can be understood by a glance at Table 1. It will be seen that in a large number of the cases the complications were due to chronic alcoholism, and that serious conditions, like fractures and pneumonia, which are so commonly associated with delirium tremens, are relatively rare in this series of cases.

TABLE 1.—COMPLICATIONS

Complication.	Recovered.	Died.	Complication.	Recovered.	Died.
Acute dilatation of stomach	1	0	Hernia	1	1
Bronchitis	3	0	Hemorrhoids	1	0
Carcinoma	1	0	Infections, cellulitis, etc.	2	9
Cardiospasm	1	0	Influenza	1	0
Catarrhal jaundice	1	0	Morphinism	7	0
Cerebral hemorrhage	1	0	Neuritis	3	1
Cholecystitis	1	0	Nephritis	41	25
Cirrhosis of liver	9	6	Organic heart disease	13	6
Corneal ulcer	1	0	Pleurisy	1	2
Dementia	1	0	Pneumonia	4	10
Dislocations and sprains	1	3	Pregnancy	2	0
Enteritis	1	0	Prolapsed uterus	1	0
Epilepsy	6	2	Pulmonary tuberculosis	1	2
Exposure	1	0	Rheumatism	0	3
Fractures	4	9	Tabes dorsalis	2	0
Gastritis	11	0	Varicose veins	2	0
			Venereal diseases	6	0
			Wounds	12	13

In collecting the statistics the original history was examined in each case and the relevant facts transcribed to a library card. Each card was made to show the age and sex of the patient, whether the case was incipient or fully developed, whether it developed from the incipient into the delirious stage in the hospital, and, if so, after how long and under what treatment, and also to show each drug used, with the size and number of the doses, together with the results of the treatment and the complications. The cards could then be sorted and the cases classified according to any one of the points noted.

The cards were first separated into two groups representing, respectively, the incipient and the fully-developed cases. The incipient cases were those which showed only insomnia, restlessness and tremor. In the fully developed cases the patients were noisy, delirious, with uncorrected hallucinations. In a number of cases the patients entered the hospital in the incipient stage and later became delirious. These cases enter twice into the statistics—first as incipient, later as developed cases—and, as there were 147 of them, there appear to be 647 cases, instead of 500 represented in Tables 2 and 3.

Table 2 gives in detail the results of treatment by the various drugs in the incipient cases. These results are expressed in terms of the percentage of patients that became delirious. Table 3 shows the results of treatment of the delirious patients, and here the mortality is used as the index. Since the drugs were often used in combination, it was not possible to compare a series in which one drug was used alone with another series in which some other drug was used alone. Accordingly each drug was considered separately, and the series in which it was used compared with the series in which it was not used.

TABLE 2.—INCIPIENT CASES

BROMIDS used in	190 cases, delirium followed in 32.6%
BROMIDS not used in	156 cases, delirium followed in 52.8%
Difference	20.2%
CHLORAL used in	86 cases, delirium followed in 20.6%
CHLORAL not used in	260 cases, delirium followed in 48.9%
Difference	28.3%
MORPHIN used in	71 cases, delirium followed in 38.5%
MORPHIN not used in	275 cases, delirium followed in 42.5%
Difference	4.0%
SCOPOLAMIN used in	39 cases, delirium followed in 36.0%
SCOPOLAMIN not used in	307 cases, delirium followed in 41.5%
Difference	4.5%
WHISKY used in	110 cases, delirium followed in 28.1%
WHISKY not used in	236 cases, delirium followed in 48.3%
Difference	20.2%
ERGOT used in	75 cases, delirium followed in 23.6%
ERGOT not used in	271 cases, delirium followed in 46.9%
Difference	23.3%

TABLE 3.—DELIRIOUS PATIENTS

BROMIDS used in	198 cases, with mortality of 45.5%
BROMIDS not used in	103 cases, with mortality of 40.8%
Mortality increased	4.7%
CHLORAL used in	145 cases, with mortality of 44.9%
CHLORAL not used in	156 cases, with mortality of 42.9%
Mortality increased	2.0%
MORPHIN used in	150 cases, with mortality of 43.3%
MORPHIN not used in	151 cases, with mortality of 44.7%
Mortality decreased	1.4%
SCOPOLAMIN used in	110 cases, with mortality of 50.9%
SCOPOLAMIN not used in	191 cases, with mortality of 37.9%
Mortality increased	13.0%
WHISKY used in	131 cases, with mortality of 44.7%
WHISKY not used in	170 cases, with mortality of 42.9%
Mortality increased	1.8%
ERGOT used in	80 cases, with mortality of 30.0%
ERGOT not used in	221 cases, with mortality of 51.6%
Mortality decreased	21.6%

Among the sedative drugs the bromids were most extensively used in the treatment of these cases. It was customary to give equal parts of sodium, potassium and ammonium bromid in doses of from 10 to 30 grains each, or 30 to 90 grains of the mixture every four hours. Table 3 shows that the bromids were used in 198 cases with delirium, with a mortality of 45.5 per cent., and that in 103 similar cases treated without bromids the death rate was only 40.8 per cent. This increase in the mortality, amounting to 4.7 per cent., was apparently due to the use of bromids. We believe, however, that Table 4 will show that the increased mortality was due to too large doses too frequently repeated, and that

smaller quantities do good rather than harm. Better results were obtained with the incipient cases. In the 190 incipient cases in which the patients were treated with bromids, only 32.6 per cent. of the patients became delirious, while of 156 similar cases in which the patients were not so treated 52.8 per cent. of the patients became delirious. This represents a decrease of 20.2 per cent. in the patients developing delirium in the hospital.

Chloral was also extensively used in doses ranging from 10 to 30 grains, often repeated, every four hours, and frequently given in combination with the bromids. By reference to the tables it will be seen that chloral, as administered in these cases, is of no service after active delirium has set in. In fact, it seems actually to have increased the mortality by 2 per cent. It is in the treatment of the incipient cases that the great value of chloral is seen. It reduced the percentage of cases developing delirium in the hospital from 48.9 per cent. to 20.6 per cent., a decrease of 28.3 per cent. Chloral is of more value than bromids in the incipient cases because the patient can be put under its influence in a much shorter time.

Morphin is also practically useless in the cases with delirium, although instead of slightly increasing the mortality, as did chloral and the bromids, it reduced the mortality 1.4 per cent. This is probably to be explained by the fact that morphin was usually ordered in single ¼-grain doses, and thus relatively small quantities were given, while the bromids and chloral were ordered in relatively larger doses, and these were repeated every four hours. Thus in a few days the patient would get enormous quantities of the sedatives. The same reasoning accounts for the poor results in the incipient cases in which morphin reduced by only 4 per cent. the number of patients developing delirium. In these incipient cases the patients should be held steadily under the influence of regularly repeated doses of the sedatives.

Scopolamin was also given in single doses of 1/100 to 1/50 of a grain, and the series in which it was given, like the morphin series, illustrates the futility of single doses of sedatives in controlling the incipient cases. It decreased the number of patients developing delirium by only 4.5 per cent. But, unlike morphin, scopolamin is extremely dangerous in the delirious cases. Even when its use was as restricted and as carefully regulated as it was in this series of cases, it increased the mortality 13 per cent.

It will be seen that in this series the sedative drugs increased rather than decreased the mortality. The question naturally arises whether the sedatives are harmful to the delirious patients when given in any quantity whatsoever, or whether the bad results in this series of cases was not due to the use of too large amounts.

In order to answer this question, the cases were again tabulated according to the total quantity of sedatives given. An arbitrary unit for twenty-four hours was chosen, as 60 grains of chloral, and this unit was considered as equivalent to 3 drams of bromids, 3/50 of a grain of scopolamin, 1½ grains of morphin, 60 grains of veronal, 6 drams of paraldehyd, 2 drams of sulphonal, 3 fluidrams of tincture of hyoscyamus, or 6 grains of codein. Thus whatever sedative or combination of sedatives was used in any case the total amount given could be calculated and reduced to terms of the unit chosen. In only 285 of the cases with delirium were the data complete enough for this analysis. For each of these cases the number of units of sedative was calculated and the cases arranged according to the amount given. Table 4 shows the effects of various doses of sedatives:

TABLE 4.—RESULTS OF VARIOUS DOSES OF THE SEDATIVE DRUGS

Units for 24 Hours.	Equivalent in Chloral.	Number of Patients.			Death Rate.
		Recovered.	Died.	Total.	
	Grs.				%
0	0	10	14	24	58
¼	15	43	12	55	21.8
½	30	13	5	18	27.7
¾	45	11	5	16	31.2
1	60	29	22	51	43.1
2	120	21	28	49	57.1
3	180	13	27	40	67.5
4	240	12	20	32	62.5

It will be seen from Table 4 that when no sedative was used the mortality was high (58 per cent.) and that when small quantities (equivalent to 15 grains of chloral in twenty-four hours) were used the mortality fell to 21.8 per cent., and that the mortality increased rapidly as the dose was increased. The high mortality when no sedative was used is, in part, explained by the fact that a number of patients entered the hospital in a moribund condition and died in a short time, having received only stimulant drugs. I do not think that this accounts for the entire difference between the mortality of those patients who received small doses and the mortality of those who received none; for the majority of the patients who received no sedatives were treated on the homeopathic side of the hospital with homeopathic remedies. It seems clear, therefore, that small doses of sedatives equivalent to 15 grains of chloral in twenty-four hours favorably influence the course of the disease. It is certain that larger doses have a very unfavorable influence.

Whiskey was used rather extensively in these cases, notwithstanding the fact that its use is condemned by the majority of writers. It seems to have been of decided value in the incipient cases, lowering the percentage of patients becoming delirious by 20.2 per cent. In the cases with delirium the mortality was raised 1.8 per cent.

The drugs so far mentioned have increased the mortality of the delirious patients, except morphin, and its effect was practically negative. We come now to a drug which has produced a marked decrease in the mortality. This drug is ergot. It was usually given in the form of the fluidextract, in dram doses, repeated every four hours, and often in combination with whiskey. In those cases in which ergot was used the mortality was only 30 per cent., while among those patients treated without ergot it was 51.6 per cent. This is a reduction of 21.6 per cent. in the mortality. This result is striking when considered with reference to the uselessness of other drugs. Ergot is likewise of value in the incipient cases, the percentage of patients developing delirium being reduced 23.3 per cent. by its use.

The importance of ergot in the treatment of these patients may justify a little digression from the strictly statistical line of argument. Its use in the Cook County Hospital in the treatment of delirium tremens dates from the spring of 1907, and so favorable have been the results that it is now generally employed for that purpose by the resident staff of the institution. The beneficial results of its administration has seemed to me to be clearly demonstrated in those cases which have been under my care. It seems not so much to shorten the attack as to render the delirium much quieter, thus preventing death from exhaustion before the natural crisis arrives. Any attempt to explain its influence

would be pure speculation. It is possible that it may act by decreasing the cerebral hyperemia. By equalizing the circulation it may tend to prevent the edema of the brain and meninges, "wet brain," so frequently seen at autopsies on cases of delirium tremens.

Stomachics were used extensively, but were not taken into account in these statistics.

Stimulants were used very little, alcohol alone being consistently used. Other stimulants were used only when the patient was in a moribund condition. It would be interesting to know what would be the effect of a systematic use of digitalis, caffein and strychnin throughout the course of the disease, but the series of cases under discussion does not furnish the necessary data.

It will be obvious from a study of the accompanying tables that drugs are not of such value in the treatment of these patients that other therapeutic measures can be neglected. This is especially true of the wildly delirious patients, for whom much more can be done by nursing than by drugs. But I can not here do more than emphasize the importance of proper methods of restraint, frequent administration of liquids and the use of sedative baths.

In the incipient cases much can be done with drugs. Large doses of the sedatives should be given, especially chloral and bromids, and these should be repeated every four hours and kept up for several days after all signs of the disease have disappeared. Whiskey should be given regularly. Ergot is also of value and may be given as the fluidextract, or in cases complicated with gastritis the aseptic preparations of ergot may be given hypodermically. In the hospital, dram doses of the fluidextract were given every four hours for a week and more without any bad effects. If a standardized preparation of the fluidextract were used, smaller doses would probably be equally effective. Stomachics are often indicated, especially capsicum. Stimulants, aside from alcohol, are unnecessary except in cases showing cardiac incompetence.

In the cases with delirium care must be taken not to overdose the patients. Sedatives may be used with care, not more than 30 grains of chloral or its equivalent in other sedatives being given in twenty-four hours. Scopolamin is dangerous and whiskey useless. Ergot seems to have been of the greatest value and certainly deserves an extended trial. It is a question whether stimulants should be given to all delirious patients, but when there are signs of failing heart action, of developing "serous meningitis," or when the patient is passing from delirium to stupor and coma, heart stimulants should be given hypodermically.

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TUBERCULOSIS

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It seems strange that after the many years of study devoted to tuberculosis by the medical profession, in medical schools and text-books on the practice of medicine, the fact that this is a general constitutional disease is apparently lost sight of; a good definition or a description of tuberculosis as such is rarely, if ever, seen.

Text-books all define pulmonary tuberculosis and fully describe its etiology, pathology, symptoms and treatment; casually mention in this connection the possibility of secondary infection of other organs and tissues, but describe these secondary manifestations of a general systemic infection under chapters devoted to such special organs or tissues. That this is illogical must be apparent to every thinking professional man.

Allow any patient afflicted with tuberculosis to go his way untreated and, sooner or later, secondary involvements are certain to manifest themselves. I have never seen at postmortem a single instance in which some such secondary lesion was not found in some organ or tissue, even though it had not been manifest clinically during life. I regret that this is not confined to untreated cases, for owing to our lack of knowledge in the past of the treatment of tuberculosis many patients have followed this course.

In all text-books this disease is usually defined and described along the lines laid down in a well-known text-book on the practice of medicine (edition of 1907), for the author of which I entertain the greatest respect and admiration, in which tuberculosis is defined in the following manner:

"Tuberculosis is a general or local infectious inflammatory disease, the result of the implantation and proliferation of the tubercle bacillus."

The first chapter considers etiology and discusses the tubercle. The disease is then classified under two divisions, acute and chronic tuberculosis, and these are subdivided as follows:

II.—Acute tuberculosis.
1. Diffuse general tuberculosis (acute milliary).
2. Pulmonary form of acute tuberculosis.
3. Tuberculous meningitis.

III.—Chronic tuberculosis.
1. Pulmonary tuberculosis.
(a) Chronic ulcerative phthisis.
(b) Fibroid phthisis.

The next chapter is headed:

IV.—Tuberculosis of lymphatic glands.
V.—Tuberculosis of the serous membranes.
(a) Tuberculosis of the pleura.
(b) Tuberculosis of the peritoneum.
VI.—Tuberculosis of the genitourinary organs.
VII.—Tuberculosis of the mammary glands.
VIII.—Tuberculosis of the heart and blood vessels.

Each of the chief foregoing chapters treats of the subject as if it were a distinct disease, giving definition, etiology, pathology, symptomatology, treatment and prophylaxis.

Among the chapters under the heading of tuberculosis we find no mention of that frequent pathologic condition, tuberculous laryngitis, but this important feature is considered under diseases of the larynx. Tuberculous infections of the serous membranes, and of the genitourinary tract, are considered as coming under the domain of the surgeon. Tuberculosis of the bones and of the joints is not mentioned, evidently being left to the text-books on surgery. Tuberculosis of the skin (lupus) is briefly mentioned in connection with the description of the tubercle bacillus.

I believe that, from our knowledge of tuberculosis, the definition above mentioned is manifestly wrong; tuberculosis is pre-eminently a disease of systemic infection, is constitutional in its character, and is never a local condition.

The classification into acute and chronic forms is not borne out by the facts; tuberculosis is never an acute process, but is necessarily a chronic condition pathologically: at times it does run a rapidly fatal course, but

this can not possibly cause it to be classified as an acute form of the disease, but rather, I would suggest, as a fulminating or pernicious type.

Under the heading "Chronic Tuberculosis" we find pulmonary tuberculosis, considered under the subdivisions, chronic ulcerative phthisis and fibroid phthisis; these are merely unfavorable or favorable phases of the same morbid process occurring in different patients, due probably, first, to a difference in the virility of the infecting organisms; second, to the greater or less resisting power of the respective patients (acquired or inherited); third, to environment and social condition; and, fourth, to the personal habits of the individual.

We have recognized four avenues through which the infecting organism may invade the human body, viz.: through the intestines, through the tonsils, by inspiration, and through wounds of the skin.

Heretofore it has been considered that the disease was the outcome of the implantation of the bacillus in these organs or tissues, and that it produced a pathologic change in the tissues so invaded, eventually giving rise to systemic infection.

For a long time I have believed that this view is incorrect[1] and that the primary lesion is seldom, if ever, produced in this way, but that the bacilli so introduced into the tissues first find their way into the blood or lymph, and here develop and multiply (period of incubation), eventually selecting the least resistant tissue, in which the primary pathologic lesion of tuberculosis is developed (incipient tuberculosis).

From this initial lesion the well-known pathologic and clinical features of the disease extend, and may eventually give rise to evidences of most profound systemic infection, and an increasing area of local involvement around the primary lesion, and in many instances (always so in advanced cases), of more or less numerous secondary involvements of other organs and tissues.

The theory that the above views are correct is amply substantiated by the work of Lustgarten and others, who found in the blood and lymph of syphilitics (evidently complicated by tuberculosis) a bacillus morphologically identical with and having the same staining characteristics as the tubercle bacillus, which at the time they thought to be the specific organism of syphilis, but which view, considering our present knowledge of the *Treponema pallidum*, was incorrect. The Lustgarten bacillus could not possibly have been the smegma bacillus, for this organism has never been found in the blood or lymph.

Having eliminated the possibility of the Lustgarten bacillus being either the specific organism of syphilis, or the smegma bacillus, the only probable acid-fast bacillus left for consideration is the tubercle bacillus, which I am convinced is identical with that found by Lustgarten and his followers.

The recent work of Rosenberger[2] is the strongest possible evidence of the correctness of the views which I have held and advanced from time to time. Clinical statistics are sufficient evidence of the fact that the primary lesion of tuberculosis is most often found in the right pulmonary apex, and though this primary lesion may occur in any organ or tissue, I am strongly inclined to the belief that, having its beginning as a purely general systemic infection, it makes its first pathologic changes manifest in the lungs with such frequency as to enable us to exclude primary tuberculosis from any other organ or tissue. In the event of tuberculosis being clinically manifested in any tissue or organ other than the lungs, a careful examination of these organs by a competent physical diagnostician will usually demonstrate its presence in these organs.

Should this not be the case, I believe that the primary lesion was in the lungs but has healed, leaving behind no local evidence of its former presence.

The terms pulmonary tuberculosis, or tuberculosis of any other organ or tissue, are misnomers and are fundamentally wrong, because they are applied to diseases which do not exist in themselves, but are only local pathologic exhibitions of a constitutional or general systemic infection.

The following definition and classification, though necessarily faulty, I believe will fairly describe tuberculosis as we now know it:

Tuberculosis is a chronic, constitutional, infectious granulomatous disease, produced by the tubercle bacillus, characterized pathologically by round-celled infiltration of the organs or tissues, and symptomatically by more or less evidence of systemic infection associated with symptoms relative to and characteristic of an inflammatory process in the organs or tissues locally involved.

CLASSIFICATION

Etiology: Described
Invasion: Avenues of, described.
Pathology: Described.
Stages: Incubation, incipient, moderately advanced, advanced.
Types: Latent, chronic, fulminating or pernicious.

SECONDARY MANIFESTATIONS DESCRIBED

The stage of incubation is that period between the invasion of the bacillus and the development of the primary pathologic lesion. It is of indefinite duration, and probably produces a rapid pulse as the only symptom.

The incipient stage immediately follows the development of the primary lesion. There are symptoms of mild systemic infection associated with slight evidences of localized tissue involvement. The primary lesion is a tubercle, which may appear in any organ or tissue in which the infecting organism finds lodgment and a favorable field for growth. In most instances this is in pulmonary tissue (which is least resistant) and most frequently the right apex.

The moderately advanced stage is that in which the symptoms of systemic infection and of the local manifestations of the disease are more marked, giving evidences of increased area involved in the organ or tissue primarily affected, or of autoinfection of some other organ or tissue.

In the advanced stage there is evidence of profound systemic infection, with marked local involvement of one or more organs or tissues.

TREATMENT

From a year's experience with the administration of mercury by deep muscular injections associated with the general treatment advocated for this disease, I again assert the specific nature of mercury in relation to tuberculosis, and in support of this I submit the following statistics. (See next page.)

There were 3 additional deaths in the hospital during the year, 2 from typhoid and 1 following operation for appendicitis. Four of the 16 who died had typhoid in

1. Annual Report of the U. S. Naval Hospital, Las Animas, Colorado, for 1908; THE JOURNAL A. M. A., Nov. 28, 1908.
2. Am. Jour. Med. Sc., February, 1909.

August, and their deaths were undoubtedly indirectly due to this disease.

	No. of Patients Who Have Remained in Hospital Two or More Months.	Those Who Voluntarily Took the Mercury Treatment.	Those Who Preferred the Routine Treatment Solely.
Cured	8	7	1
Marked improvement	43	43	0
Improved	16	14	2
Slight improvement	17	10	7
Stationary	19	0	19
Failed	42	4	38
Died	16	5	11
Total number	161	83	78

Of those cured, 87.5 per cent. took mercury treatment; 12.5 per cent. took routine treatment.

Of those showing marked improvement, 100 per cent. took mercury treatment; none took routine treatment.

Of those improved, 87.5 per cent. took mercury treatment; 12.5 per cent. took routine treatment.

Of those slightly improved, 58.82 per cent. took mercury treatment; 41.18 per cent. took routine treatment.

Of those remaining stationary, none took mercury treatment; 100 took routine treatment.

Of those who failed, 9.52 per cent. took mercury treatment; 90.48 per cent. took routine treatment.

Of those who died, 31.2 per cent. took mercury treatment; 68.8 per cent. took routine treatment.

Combining the items cured, marked improvement, improved and slightly improved, under the heading improved; stationary as such, and combining the items failed and died under the heading failed, the following percentages pertain:

Of the 83 patients on mercury, 89.16 per cent. improved; none stationary; 10.84 per cent. failed.

Of the 78 patients on routine treatment, 12.82 per cent. improved; 24.36 per cent. remained stationary; 62.82 failed.

The above patients are classed as follows:

Incipients (first stage)	1
Moderately advanced (second stage)	59
Advanced (third stage)	101
Total number	161

In the above cases the following secondary tuberculous involvements have been diagnosed clinically:

Brain, 1; larynx, 16 (13 ulcerative and 3 infiltrated); larynx and pharynx (ulcerative), 3; intestines, 9; stomach, 1; genitourinary tract, 3; general glandular infection, 4; ischiorectal fistula, 6; bone infection, 3.

At postmortem in 19 cases tuberculosis of various organs and tissues have been found as follows:

Intestines, 13; left kidney, 9; right kidney, 6; spleen, 7; liver, 4; pancreas, 0; mesenteric glands, 14; heart, 1; left lung, 19; right lung, 19; larynx, 7.

Of the complications existing in these 161 cases, the following were found:

Cardiac hypertrophy, 1; mitral regurgitation, 3; tricuspid stenosis, 3; pulmonary stenosis, 2; arteriosclerosis, 5; chronic passive congestion of liver and spleen, 16—of the liver 19 and of the spleen 15; hypertrophic pharyngitis, 1; glaucoma, 1; exophthalmic goiter, 1; malaria, 3; appendicitis, 1; syphilis, 8; displaced kidney, 1; typhoid in 25 cases.

Since November, 1908, in this hospital we have been administering mercury in gradually increasing doses until the therapeutic limit is reached, after having established the maximum dose, it is then divided by two and the injections continued on this dose. During the intervals between injections the use of potassium iodid has been discontinued.

This procedure has increased the efficiency of the treatment in a decided manner.

In addition to the cures reported up to Dec. 31, 1908, there are now three officers and two enlisted men ready for duty, and about six additional men who will probably be ready for duty in from four to six weeks.

U. S. Naval Hospital.

MEDICAL EDUCATION

A PLEA FOR THE DEVELOPMENT OF LEADERS

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It is related that an American officer, who was visiting St. Petersburg, asked the Russian officer by whom he was being conducted through the grounds of the palace why a certain sentinel, who was pacing up and down in the middle of the courtyard, should have been stationed in so unusual a place. The Russian was unable to answer, but promised to investigate. This led to the discovery that sixty years before, one of the little princesses had been walking in the courtyard with her father in the spring of the year and had found a snowdrop growing in the middle of the yard. She expressed a desire that no one pick it, and her father therefore ordered a sentinel to be placed on duty to protect the snowdrop. The order had never been rescinded, and for sixty years a guard had been pacing up and down in this position.

So it is in our hospitals; we find the Old Guard pacing up and down in defense of traditional snowdrops whose value neither they nor any one else are able adequately to explain.

Take, for example, the rotation in service. What would have been thought if Dr. Curtis, Dr. Austin Flint, Sr., and I had regularly exchanged laboratories after a service of four months each? You would have said that the scientific men had gone crazy, and you would have been right. There must be pride in one's own scientific habitat if there is to be success. Take another abuse, that of holding a hospital position and never visiting the hospital, but appointing some dependent to do it for one during the period of his good behavior. It is as though I still maintained the power of appointment to the chair of physiology at the Yale Medical School, where I was once professor. If I had such power, and with increasing age became more and more sensitive regarding any proposition to curtail it, and if by degrees I developed an egotism bordering on paranoia, you would then have in me as true an obstacle to proper progress as now abides in the Old Guard still marching up and down in the middle of the hospital grounds protecting the abuses of the past.

A well-known architect tells me that people from other parts of the country who come to New York return to their homes convinced that the architecture of residential Fifth Avenue represents the greatest existing achievements. We all know that it only requires visits to Oxford and Cambridge in England, to the Louvre and Notre Dame in Paris, to the palaces of the Italian nobility in Genoa, Venice, Florence and Rome to realize that Fifth Avenue represents architectural insanity.

If one is to understand one's own failings it will not do to limit one's horizon. It is necessary to travel. If one visits England one finds there is little improvement on our own medical methods. The same thing is true of France. If one passes to Germany, however, one finds there a set of medical men who have no counterpart in this country. Take Friedrich Müller, pro-

fessor of medicine at the University of Munich as an example. Müller was trained in problems of metabolism in Voit's physiologic laboratory. He then went to Berlin as assistant of the celebrated Gerhardt. He there accomplished work with Zuntz concerning the metabolism of professional fasters. He came into intimate contact with Emil Fischer, the world's greatest chemist. Passing to Marburg as professor of medicine, he became associated with Kossel, the physiologic chemist, and Hans Meyer, the pharmacologist. He was then called to Basel, where the breadth of his knowledge and the glow of his enthusiasm roused and dominated the group of able young men who there surrounded him. He was offered the chair of medicine in Munich, till then held by the great von Ziemssen. Later came an offer to take von Leyden's place in Berlin, but this was declined. Here one sees the lesson of how a struggling young privat-docent on small salary rises through the laboratories and his personal ability to a position of dominating power.

Von Noorden has attained his position through laboratory work of the most valuable kind, and he ranks as a master in his knowledge of the world's literature.

Minkowski, once a pupil of Schmiedeberg, and now professor of medicine at Greifswald, has by laboratory methods brought to light many secrets of gout and diabetes.

Professor Krehl of Heidelberg is another high product of German culture. He, too, refused an offer to take von Leyden's place in Berlin, and in recognition of this the Grand Duke of Baden-Baden, from his privy purse, gave him 250,000 marks ($60,000) to spend as he saw fit.

We can only mention the names of Kraus, His, Magnus-Levy, and Moritz to further emphasize the members of this class of magnificent men whose counterparts do not exist in this country.

When I have spoken with distinguished and powerful clinicians about imitating the German methods, I have always been told that that kind of thing was impossible here. The attitude has always been one of *non possemus*.

But why can it not be done? The impossibility can be due only to one of three possible reasons: One is that we are all dollar-chasers; the second, that we are intellectually deficient; the third, that our system is rotten.

One finds that there are dollar-chasers in Germany also. As regards comparative intellectuality, Professor Voit once said to me, *"Ein Amerikaner kann ja alles machen,"* and I believe it. The truth of the whole matter is that the system is rotten and reeking and cries out for drastic reformation.

The development of American surgery has been dependent on the efficiency of the anatomic laboratories.

The development of American medicine can come only through men who have a knowledge of modern chemistry, physiology, pharmacology and pathology; and medicine should be taught by men who have keen personal interest and personal first-hand information concerning these fundamentals on which medical science is based.

Where are such men? Aye, there is the trouble. You have not a great medical clinic because you have not properly educated men, and you have not properly educated men because you have not a great clinic. But there are young men here to-night who could develop the work, if they had the chance. Without referring to any one in this audience, I may mention the names of Christian A. Herter and David L. Edsall as being men who have had the training suited to the development of a great clinic, if the system of the hospitals was modeled on a rational basis.

A scheme for the redemption of New York from reproach is this: Raise a fund of $500,000. Pay the professor of medicine half the income, or $10,000 a year, in return for which he shall spend half his day from 9 in the morning to 1 o'clock instructing students, making rounds in the hospital and supervising research work. He should have under him two assistants at $2,500 per annum, who should be permanent resident internes of the hospital and men who can grow to be professors of medicine. The $5,000 income remaining should be used for the expenses of research at the discretion of the professor.

But, you say, $10,000 is a large salary. Yes, but you are paying for a big man. The first year I taught at the Yale Medical School, eighteen years ago, the total budget for the year was $10,000. But here we are parochial again. If we pass to Germany once more, we find that the great clinical positions carry $10,000 as a yearly income for similar work, and Osler received $10,000 in Baltimore. It costs $10,000 annually to heat and light the Anatomic Institute in Munich, a building larger than all the buildings of the Johns Hopkins Medical School combined.

We must get away from this idea of thinking that a scientific man should be able to get along on the salary of a chauffeur.

I am not at all sure that I have carried conviction into the minds of many who are present here to-night. But that I can not expect. Changes are rarely brought about through great popular uprisings. Take, for example, the introduction of pharmacology into the medical schools of New York. There was no demand for it on the part of the physicians, or on the part of any faculty, but Dr. Wallace was brought to New York by a fund which was raised by Dr. Herter, Dr. Dunham and one other. And Wallace trained Richards, who carried on the work at Columbia, and shortly Hatcher was appointed at Cornell.

Transformations are not brought about by the power of the mob, but by the power of the individual.

I have tried to raise this $500,000. I have approached Mr. Carnegie and Mrs. Sage, and both refused to see me. But some time, some day, some man who has the power to raise the money and the intelligence to use it rightly will be able to confer the untold blessings on this community which would follow the establishment of a chair of medicine for the training of physicians in an atmosphere of developing research.

And, finally, when we consider medical education we should put the thought of our personal benefit in the background. We are dealing not with ourselves. We are dealing with the students who represent what is beyond. We must remember that for a little while into our hands has been entrusted the welfare of the future.

Throat Examination in Infants.—K. H. Goldstone emphasizes the importance of taking a culture from the throat of any infant with a dry metallic cough and a slight rise in temperature. Laryngeal diphtheria, he asserts, is much more common than is generally supposed.—*Jour. Med. Soc. of New Jersey*, February.

A STUDY OF THE BLOOD AFTER SPLENECTOMY FOLLOWING TRAUMA

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The aim of this paper is not to enter exhaustively on the proved or problematic relations of the spleen to the various blood elements either during embryologic life or during extrauterine existence under normal or pathologic hemic conditions; but rather to point out as concisely as possible the variation, or lack of variation, from normal, as found in a series of twenty-six complete blood examinations in a case of splenectomy following traumatic rupture of that organ. The cause for the splenectomy, trauma, afforded an excellent opportunity to observe what effect the removal of a spleen hitherto healthy would have on the elements of a blood unaffected by any hematopoietic disease.

The examinations, made during a busy surgical service, were made at first every day, later every other day, then every third day, each time as nearly at 8 p. m. as was possible. The patient left the hospital and the city on Sept. 3, 1907, but came back for observation on October 22 of the same year, when the last examination was made. In the estimation of the hemoglobin the Tallquist method was employed; in the differential count of the leucocytes 500 cells were examined. Wright's stain was used for microscopic examination.

For the opportunity and permission to follow the blood picture I wish to thank the attending surgeon, Dr. Albert Vander Veer.

BLOOD COUNT SHOWING VARIATIONS AFTER SPLENECTOMY

Date.	Red Corpuscles.	Hem. %	Color Index.	White Corpuscles.	Polynuc. Leucocytes (Neutroph.) %	Small Ly'p's. %	Large Ly'p's. %	Transitionals %	Large Monos. %	Eosinophiles. %	Eosinophiles. %	Temperature.	Pulse.	Corrected Color Index.
July 16.....	5,250,000	70	0.66+	28,320	86.0	8.4	3.6	1.4	0.6	..	..	101.4	140	0.93+
July 17.....	3,030,000	70	1.1 +	23,333	87.4	6.2	4.8	0.8	0.8	..	..	100.2	100	1.58+
July 18.....	3,460,000	70	1.0 +	18,600	81.6	12.4	4.6	1.0	..	0.4	..	100	84	1.40+
July 19.....	3,575,000	70	0.98+	16,500	84.0	8.4	5.8	0.2	..	1.6	..	100	90	1.34+
July 20.....	3,560,000	70	0.98+	17,800	71.0	16.0	8.2	..	..	3.8	..	100.6	100	1.35+
July 21.....	3,610,000	70	0.96+	17,600	70.2	13.0	8.4	2.8	1.8	3.8	..	100.2	88	1.32+
July 22.....	3,705,000	70	0.93+	19,811	63.4	25.0	6.2	1.0	0.6	3.8	..	100.2	88	1.29+
July 24.....	3,800,000	75	0.98+	16,200	58.4	24.6	7.8	3.4	3.4	2.4	..	99	76	1.34+
July 26.....	3,820,000	75	0.98+	24,100	69.2	15.0	9.6	1.6	2.6	4.0	..	99	78	1.34+
July 28.....	2,980,000	75	1.27+	16,600	69.4	19.2	8.2	1.0	1.6	0.6	..	100	80	1.72+
July 30.....	3,235,000	75	1.17+	20,800	71.0	17.2	9.2	0.6	0.6	1.4	..	100	100	1.60+
Aug. 1.....	3,950,000	75	0.94+	12,500	61.4	26.6	7.4	0.4	0.8	3.4	..	99.8	98	1.31+
Aug. 3.....	4,520,000	80	0.88+	14,600	63.6	22.4	5.4	0.8	1.4	4.4	..	99	90	1.22+
Aug. 5.....	4,525,000	80	0.88+	16,043	58.4	28.0	6.8	1.0	1.2	4.6	..	98.8	86	1.22+
Aug. 7.....	5,105,000	80	0.78+	15,600	42.0	43.6	9.6	0.4	2.6	1.8	..	98.6	86	1.08+
Aug. 9.....	4,520,000	80	0.88+	11,000	55.6	31.6	4.2	1.2	1.8	5.6	..	99.4	76	1.22+
Aug. 11.....	4,860,000	80	0.82+	15,000	57.2	30.4	4.8	1.8	0.6	5.2	..	99.4	84	1.12+
Aug. 14.....	4,830,000	80	0.83+	14,000	52.6	33.0	6.6	0.8	4.0	2.8	0.2	98.8	90	1.13+
Aug. 17.....	4,850,000	85	0.86+	20,100	65.8	22.6	6.4	1.4	1.0	2.2	0.6	99.2	78	1.19+
Aug. 20.....	4,845,000	75	0.77+	16,200	54.0	35.0	6.0	0.8	1.2	3.0	..	99.4	84	1.05+
Aug. 23.....	5,840,000	75	0.64+	10,000	48.6	31.4	10.4	0.4	4.2	4.4	0.6	98.6	84	0.87+
Aug. 26.....	4,590,000	75	0.81+	15,200	45.4	43.8	3.4	0.8	2.8	3.6	0.2	98.8	82	1.12+
Aug. 29.....	5,450,000	75	0.68+	18,000	49.0	42.6	4.6	0.2	1.8	1.4	0.4	98.8	92	0.93+
Sept. 1.....	4,290,000	75	0.87+	12,400	34.2	61.0	3.0	1.2	0.4	0.2	..	98.4	100	1.19+
Sept. 3.....	5,190,000	75	0.72+	28,400	78.2	18.0	2.0	0.6	0.8	0.4	..	101	120	0.98+
Oct. 22.....	3,650,000	75	1.02+	14,100	53.4	39.0	1.4	3.0	0.6	2.0	0.6	.....	...	1.40+

HISTORY OF THE CASE (DR. J. N. VANDER VEER)

Patient.—J. X., aged 11, schoolboy, was brought to the Albany Hospital, July 15, 1907, at about 10 a. m. The family history and past history were negative.

Present Illness.—On the afternoon of July 11 the patient while on an outing climbed into a tree and fell about thirty feet to the ground, striking on his abdomen. Although experiencing some pain at this time, he lay on the ground watching the other children play until 5 p. m., when the family returned home. The patient went with them, and seemed to experience only a slight pain in his abdomen. At 8 o'clock that evening his family physician, Dr. Troidle, was called to see him, as the boy was suffering some pain in his abdomen, in the neighborhood of the umbilicus. He had had a good bowel movement. Physical examination at this time proved absolutely negative, as there was no rigidity of the muscles whatsoever, no dulness in the flanks, and a specimen of urine showed no lesion of the genitourinary tract. A mild cathartic was ordered for the patient, and it was suggested that he stay in bed. On the following day he felt well, but on the day after this, the second day following the injury, he complained of some pain in the left flank; there was a slight rigidity of the left hypogastric region and the boy showed some signs of shock. He was seen that afternoon by the attending surgeon, and it was suggested that hot packs be applied, a blood count be made and a careful estimate of his temperature and pulse be kept until the next morning. He grew decidedly worse that night, and the third day following the accident was brought to the hospital, with a tentative diagnosis of internal hemorrhage of some form, presumably of the intestine, for he had had no further bowel movement since the day of the accident. A low enema did not bring forth any results, and percussion at this time over the flanks, especially of the left side, gave dulness. The temperature was slightly subnormal, being 97 F., and the pulse varied from 90 to 100.

Operation.—On entrance to the hospital, as soon as preparation for an abdominal section could be made, the patient was placed on the operating table. The first incision (Dr. Albert Vander Veer) began at the umbilicus and extended downward for a distance of about three inches; some free blood was encountered, and it was then surmised that there was an extensive rupture of some one of the internal organs, presumably the liver or spleen. Examination of the intestines through this incision revealed that they were intact, with no injury whatever, and there were no signs of a peritonitis at this point. The incision was then extended upward around the umbilicus to the ensiform cartilage, when more free blood was encountered, and palpation on the left side showed that there was a rupture of the spleen. The incision was then extended to the left beneath the costal margin and the spleen brought into view, showing a stellate rupture on the internal surface, not large in character, and occupying a space which could easily be covered by a silver dollar. The spleen was quite movable, and it was an easy matter to throw a chromicized catgut ligature around the pedicle and tie it off *en masse*.

The patient recovered nicely from the operation; the drainage-tube which had been placed down on to the pedicle was removed at the end of the fifth day and a small gauze wick substituted. There were no resultant symptoms following the operation. Throughout there was a gradual recovery, save for two instances in which the boy was allowed to partake of food which had been smuggled in by overindulgent relatives. He left the hospital September 3, clinically in excellent condition, and has since (to Nov. 15, 1908) progressed as a normal boy in every respect.

The results of the examination can be seen *in toto* in the tabulations, which show the number of red blood

cells; the percentage of hemoglobin; the color indices, first estimated with 100 per cent. hemoglobin and 5,000,000 red cells as a basis, then calculated with 80 per cent. hemoglobin and 5,500,000 red cells at normal for a boy of 11 years; the total number of leucocytes with the percentage of the various forms, together with the pulse and temperature at the time of the examination.

The first count, taken on the evening of the day of the operation, showed a red-cell count of 5,250,000; the next day it had fallen over 2,000,000. The count then gradually rose until July 28, when there was again a sudden decrease of about 1,000,000 red cells. And so further there were rises and falls of 500,000 to 1,000,000 red cells in two or three days. On August 23 the count reached 5,840,000, the highest noted, only to drop to 4,590,000 on August 26; then it rose and fell with each successive count until, on the last estimation, October 22, the reds numbered only 3,650,000 cells. We have then a lessened number of red corpuscles, with a surprising variability from day to day, a fluctuation that apparently has no connection with the degree of leucocytosis or the temperature.

Microscopically, the red corpuscles showed at no time any evidence of even a moderate anemia. A few poikilocytes were found, but no nucleated forms were seen during the entire period.

In estimating the color index I took at first the normal number of red corpuscles in 1 c.mm. as 5,000,000 and the normal percentage of hemoglobin as 100 per cent. But in a child of 11 the number of red cells is normally higher, 5,500,000, and the percentage of hemoglobin lower, only 80 per cent.[1] If the later figures are normal for a boy of 11, his color index should then be calculated from a basis which is his normal. Even with the first figures as a basis, a variable color index is seen with a few high figures. If the second figures are used as normal, a variable but very high color index is obtained, resembling that found in pernicious anemia; for here the percentage value of the red cells remains, with the exception of three instances, constantly far below the percentage value of the hemoglobin.

Unfortunately, no leucocytic count was made soon after the accident; accordingly we have no means of comparing the degree of leucocytosis previous to the operation with the first count of 28,320 on the evening of the day of the splenectomy. The leucocytosis remained high until August 23, when it was 10,000; it will be noted that it never fell quite to normal, the

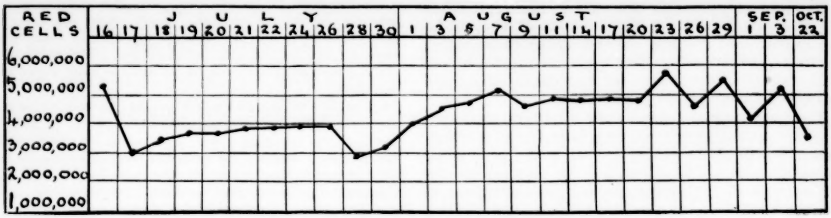

Chart 1.—Showing the great variability in the number of redcorpuscles.

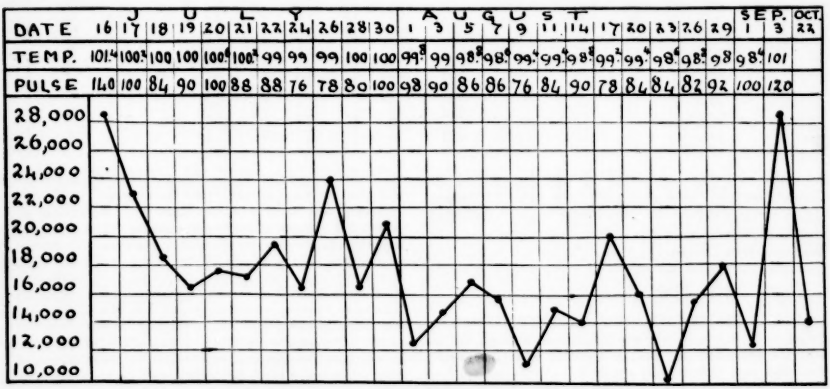

Chart 2.—Showing the variation of the leucocytes.

cause being a slight wound infection. The sudden rise to 20,000 on August 17 to 28,400 on September 3 is to be explained by attacks of acute gastritis due to the eating of an excessive quantity of fruit surreptitiously given to the patient by visitors on the ward. Examining the series of white counts we see that we have variations with the temperature, but that the count is per-

1. Blutkörperchenzählungen und Hæmoglobinbestimmungen bei Kindern, Arch. f. klin. Med., 1889, xlv.

sistently above normal. Even on October 22, when the wound was entirely healed and perfectly closed, the count was yet high, being 14,100.

Examining now the different leucocytic elements, it will be noted that at first with a high leucocyte count there is a marked polynuclear neutrophilic hyperleucocytosis with a very evident hypolymphocytosis. But as the case develops, and even in the face of ordinary inflammatory processes, it is seen clearly that the lymphocytes (adding the small and large varieties together) are gradually gaining, until on August 7, with a total count of 15,600 white cells, there are only 42 per cent. of polynuclear neutrophilic leucocytes contrasted with 53.2 per cent. lymphocytes. A hyperlymphocytosis, absolute and relative, is surely developing; on September 1 there are 34.2 per cent. polynuclears and 64 per cent. lymphocytes. Still, when there was a sudden rise in the number of leucocytes, due to an intercurrent affection, as acute gastritis, the proportion of polynuclear leucocytes rises to normal or above, as, for example, on August 17, when the count was 20,000 as compared with 14,000 on August 14, the percentage of neutrophilic polynuclears rose from 52.6 per cent. to 65.8 per cent. Again on September 3 the count was 28,400, rising from 12,400 on September 1; here is a sudden rise in neutrophilic polynuclears from 34.2 per cent. to 78.2 per cent. The last count, 102 days after operation, shows a hyperlymphocytosis of 40.4 per cent., with a high white count of 14,100.

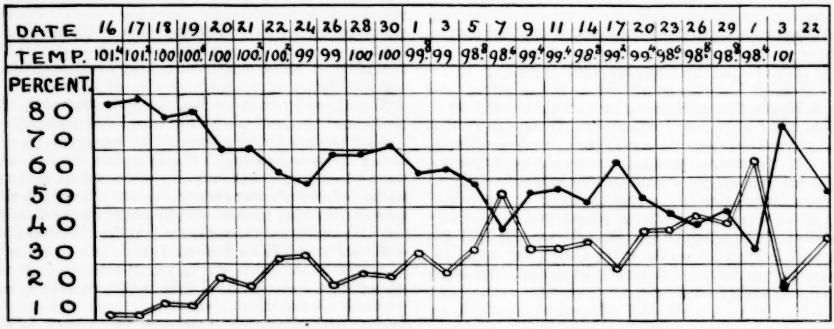

Chart 3.—Showing the variation of the polynuclear neutrophilicleucocytes and of the lymphocytes, and the gradual rise of the latter. Heavy line = polynuclear leucocytes; double line = lymphocytes.

The large lymphocytes are variable and do not bear any fixed relation to the percentage of small forms. They reach some high percentages of 8.4, 9.6 and 10.4 per cent., but at the end gradually diminish until we have only 1.4 per cent. The transitional cells show nothing important. The large mononuclears show increase at times, a phenomenon that occurs after experimental and necessary splenectomy, but at the end are only 0.6 per cent. The eosinophiles show at no time any great increase, the highest percentage being 5.6 per cent.; at the end 2 per cent. Probably if the case could have been followed there would have been found an eosinophilia, which is recognized as a regular occurrence after splenectomy.

As for the microscopic appearance of the various white cells, there were found fairly often large lymphocytes of more than normal size, with no peripheral protoplasm and very deeply basic-staining nuclei; also early in the case there were seen on several occasions small lymphocytes with karyokinetic nuclei.

What, then, has been the effect of the splenectomy on the patient? Subjectively, none; the boy is as lively and as healthy in appearance as any other boy of his age. Objectively, note may be taken of two very interesting results as shown in the blood examination, and perhaps some conclusions may be drawn as to the functions of the spleen, which surely is not an organ absolutely essential to life, as is known both clinically and experimentally.

In the first place, we have the picture of the red corpuscles, which show a most amazing variability, while their hemoglobin content is normal or above normal, and the microscopic appearance shows no sign of even a moderate anemia. What the significance of this combination is must be problematic. We know that the spleen contains much blood pigment and disintegrating red corpuscles, both normally and in hematopoietic diseases. That this "graveyard of the red corpuscles" has some influence, through an internal secretion, on the circulating blood and the producing red bone marrow, whereby it regulates the supply of fresh red corpuscles, as well as the destruction of the old corpuscles in a normal organism, thus forming an equilibrium, is possible. This hypothesis would account for the lack of balance as shown in the variability of the number of red cells, while the hemoglobin remains consistently high to give the necessary supply of oxygen for carrying on the changes of metabolism.

In the next place, a hyperlymphocytosis is recognized after splenectomy following trauma or for experiment, but here, in the face of an ordinary inflammation, calling forth normally a polynuclear neutrophilic hyperleucocytosis, we have a persistently growing hyperlymphocytosis. But—and this is again of interest—when we have an intercurrent affection, as an acute gastritis, the polynuclear neutrophiles again dominate, showing that the ordinary relations between inflammation and polynuclear hyperleucocytosis are still struggling to exist. That the removal of the spleen, which in embryologic life manufactures lymphocytes, gives a stimulus to the lymphatic apparatus of the body and thus causes a hyperlymphocytosis, is probable; that this

stimulus is very great is evidenced by the lack of neutrophilic polynuclear hyperleucocytosis where we should naturally expect it; that it is lasting is evidenced by the relative and absolute hyperlymphocytosis seen late after splenectomy.

COMPLEMENTAL OPPOSITION

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I published some time ago a brief article[1] in which was described the method of employing a coordinated contralateral spinal reflex for differentiating between functional and genuine pareses of the lower extremities. This reflex was termed complemental opposition. Dr. Zenner, of Cincinnati, published later an account[2] of some clinical observations on genuine and functional pareses which confirmed my own observations. Dr. Zenner, however, said that he could not confirm my observations on normal subjects in detecting the contralateral opposition when the initial movement involved activation of the extensor iliofemoral muscles of one side; that is, if a patient lying on a couch is instructed to oppose one leg against the surface of the couch, thus activating the extensor iliofemoral muscles of that side, Dr. Zenner does not find complemental opposition manifested in the other thigh and leg.

It is true that the complemental opposition in response to an extensor movement is not as strong and never equals the initial resistance of the other side in vigor, but I always find under such circumstances that there is activation of the contralateral iliofemoral muscles. If the normal person is instructed to oppose one leg firmly against the surface of the couch we shall see either slight flexion of the opposite thigh on the pelvis; or, if the examiner's hand is placed under the tendo Achilles of the opposite side, he will perceive that the leg rests less heavily on the couch during the initial extensor movement and that sometimes the extended thigh and leg are lifted in the air.

Lhermitte[3] gives additional evidence of the constancy of complemental opposition in pareses due to anatomic lesions and also evidence of its modification in functional cases as described in my original publication. He finds also that complemental opposition is modified in paresis of a lower extremity induced during hypnosis, just as it is modified in malingerers and hysterical subjects. But Lhermitte observed in one case of functional spastic paresis of a lower extremity that complemental opposition was present on the opposite side when the patient made an ineffectual attempt to lift the spastic paretic leg off the couch.

He concludes, therefore, that complemental opposition is manifested in spastic functional paresis as it is in paresis due to an anatomic lesion. But this is only one-half the sign, for Lhermitte's own observations are convincing of the functional character of his patient's paresis, viz., when the patient was instructed to lift the sound leg off the couch, then the paretic side exhibited much stronger complemental opposition than was manifested by the sound leg when the patient made an ineffectual attempt to lift the paretic leg. This inconsistency I should accept as quite convincing of the functional character of the paresis.

Since Lhermitte's publication I have not had the opportunity to study a case of functional spastic paresis of the legs, but the same behavior of the reflexes can be demonstrated in any normal person who will undertake to simulate alternately a flaccid and spastic paresis of a lower extremity. For my observations I employed physicians who did not know what manner of reflex was being sought.

When a flaccid paresis of one leg was simulated there was no complemental opposition on the opposite side during the feigned attempt at lifting the flaccid limb. But when a spastic paresis of the iliofemoral muscles was simulated, then complemental opposition was apparent on the two sides respectively, as Lhermitte describes it in his case of spastic functional paresis.

The behavior of the two legs under such conditions I regard as further proof that this synergic movement is purely a coordinated spinal reflex. In the case of spastic functional palsy the patient really activated the flexor iliofemoral muscles in response to the order to lift the leg in the air, and consequently the contralateral reflex in the form of complemental opposition was exhibited. The attempt to lift the leg failed because the patient arrested the reciprocal inhibition of the extensor iliofemoral muscles, but the initial excitation of the flexor iliofemoral muscles was not wanting as a basis for the contralateral reflex movement in the extensor iliofemoral muscles.

This clinical sign is a practical application of the experimental observations on the spinal dog which Sherrington published in his book, "The Integrative Action of the Nervous System." The following description is given of an experiment on a dog whose spinal cord was transected in the upper cervical region: "In the flexion reflex of the hind limb excited by noxious stimuli, e. g., a prick or a Faradic current, the limb itself is drawn up —if weakly, chiefly by flexion at the knee; if strongly, by flexion at the hip as strongly as at the knee. At the same time the crossed hind limb is thrown into action, primarily in extension, but this is soon followed by flexion, and alternating extension and flexion is the characteristic result. The rate of this alternation is about twice a second; that is to say, the foot which has stamped on a thorn is drawn up out of the way of further wounding, and the fellow hind limb runs away, and so do the fore-legs, when—which is more difficult to arrange, owing to the height of the necessary spinal transection — they also are included, fairly free from shock, within the 'spinal animal.'" By the "spinal animal" he means an animal in which the cord is separated from the encephalon by transection.

Sherrington finds that in the dog a strong flexion reflex in one hind leg nearly always brings out an extension movement in the opposite hind leg. But he further says (p. 162, loc. cit.): "In the spinal rabbit, on the other hand, and less often in the dog, the crossed reflex from one hind limb to the other is sometimes not an asymmetrical movement but a symmetrical one. This seems to stand in obvious relation to the hopping mode of progression of the animal."

From Sherrington we learn that the irradiation of reflexes results in synergic movements which expresses coordinated reflexes in the animal's external life. These coordinated reflexes are acquired; they are not congenital. We have but to watch a child learning to walk to see how the want of these coordinated reflexes defeats

1. A new Sign for the Detection of Malingering and Functional Paresis of the Lower Extremities, THE JOURNAL A. M. A., Aug. 29, 1908, li, 746.
2. THE JOURNAL A. M. A., Oct. 17, 1908, li, 1309.
3. Semaine Médicale, Nov. 25, 1908.

the child's early endeavors. It is not until the synergic movements of both limbs are effected through coordinated spinal reflexes that the act of progression ceases to be attended with conscious effort. The act of walking, then, as it is finally learned, is dependent on the acquisition of adaptive coordinated reflexes. Although these coordinated reflexes express some purposive movement and comprise the integrative action of the nervous system, they are reflexes nevertheless, just as the simple tendon reflex or pupillary reflex which consist in the activation of three factors, viz., initiation, conduction and end effect. "The outcome of the normal reflex action of the organism is an orderly coadjustment and sequence of reactions."

This experimental view of synergic activity of skeletal muscles admits of very striking clinical application so far as the lower extremities are concerned. If complemental opposition is a purely spinal coordinated reflex, then in spinal diseases in which the "synapse" is affected or destroyed we must expect to find some modification of complemental opposition; and this I find to be a fact. In ataxic subjects who suffer from tabes dorsalis, and also in Friedrich's hereditary spinal ataxia, thus far I have always found that there is a disproportion between the strength of complemental opposition and the initial movement. If an ataxic subject is directed to hold one leg in the air against resistance we find that the other leg is opposed against the couch with much more force than is employed in the initial resistance; that is, the ataxic patient always overdoes the complemental opposition. This is true of patients with moderate degrees of spinal ataxia. But when the ataxia is extreme, when all kinesthetic impulses are interrupted, when the synapse is destroyed, we see quite another behavior. If such a patient is asked to close his eyes and then lift one leg off the couch there will be a symmetrical movement in the other limb; there is then no complemental opposition in such a patient when his eyes are closed. But if the patient is directed to open his eyes and then lift one leg off the couch, he will exercise complemental opposition in the other leg, but the opposition is stronger than the force of the initial movement. Such a patient with the aid of his sight behaves just as the patients in less severe cases behave with eyes closed or opened. An extremely ataxic patient with his eyes closed reacts similarly to the malingerer or hysterical patient, but for an entirely different reason. In the extremely ataxic patient complemental opposition is absent because of the loss of synapse, but in the hysterical subject complemental opposition is absent because of cerebral inhibition. If complemental opposition is a coordinated spinal reflex, then we should find it present in spastic spinal paraplegia; and this I find to be true.

The method of eliciting the initial activation of the flexor iliofemoral muscles of one limb is to give the patient a pin-thrust in the sole of the foot. If the paralytic patient is given a moderately strong prick with a pin on the sole of the foot the thigh is flexed on the pelvis and the leg is flexed on the thigh. If the pin-thrust is stronger, then the flexion reflex is stronger. Thus in genuine spastic paraplegic patients, or in those paraplegic patients in whom all reflexes are not lost, there is a constant relation between the intensity of the pin-thrust and the intensity of the flexion response. This would not be true in functional cases. Moreover, when the flexor reflex is elicited by the pin-thrust on one side we can feel that it is accompanied by activation of the extensor iliofemoral muscles of the other side if the observer's hand is placed beneath the flexor tendons of the knee of the opposite side. The complemental opposition, it is true, is not strong; but neither is the initial reflex very strong, although the thigh and leg will be well flexed in a completely paraplegic patient if he is given a sharp pin-thrust in the sole of the foot. In a patient who had an acute myelitis with absolute paraplegia inferior with urinary and fecal incontinence and absolute loss of all sensations and all reflexes in the lower extremities, there was no such response to the pin-thrust in the sole of the foot for a very obvious reason.

Recently I employed this method of eliciting complemental opposition in a patient who suffered from paraplegia inferior after an injury. I shall mention only the facts which have a bearing on this sign. The patellar reflexes were both present, though diminished in intensity. There was absolute motor paralysis of both thighs and legs. To superficial stroking of the soles of the feet there was no response, but when firm pressure was employed in stroking the soles there was a dorsal flexion of all the toes, i. e., the response could be elicited through the protopathic paths but not through the epicritic paths. Directly after the accident the patient had priapism and marked disturbances in rectal and bladder innervation. When this patient was given a strong pin-thrust in either sole there was a good flexor response and it was accompanied by activation of the extensor iliofemoral muscles of the opposite side.

SUMMARY

To sum up the results of my observations: I think that we are justified in assuming that complemental opposition is a contralateral coordinated spinal reflex and is always present when the spinal synapse is not completely destroyed unless cerebral inhibition intervenes.

Moreover, we must observe in cases of functional spastic paresis of one limb (the iliofemoral muscles, inclusive) that the complemental opposition is present on the sound side because the patient activates his flexor iliofemoral muscles on the initial side, but through cerebral intervention he prevents the normal reciprocal inhibition of the extensor muscles of the affected side. Under such conditions the functional character of the spastic paresis is betrayed by the disproportion between the complemental opposition of the two sides respectively.

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CARCINOMATOUS POLYPOSIS OF THE COLON

WITH REPORT OF AN INTERESTING CASE

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ST. LOUIS

The very interesting character of the clinical manifestations and pathologic findings, combined with the apparent rarity of the disease in point, necessitate the presentation of our report before discussing the subject in detail.

AUTHORS' CASE

Medical Part: Dr. Niebruegge

History.—Miss A. M., aged 19, consulted me Aug. 1, 1908, complaining of a severe offensive, bloody diarrhea. The following data were elicited: The patient's mother's mother died from cancer of uterus. Parents were alive; mother healthy; father

had had intestinal trouble for a long time. There were six girls in the family; one died from insolation. There was no tuberculous history. Menses began at 13; painless and regular. The patient had always enjoyed good health until the summer of 1905, at which time her present illness began.

Present Trouble.—During the early part of July, 1905, the patient became nauseated, and vomited at frequent intervals. This continued throughout the remaining part of 1905. She was not sick enough, in her opinion, to consult a physician; she would vomit the greater portion of her food, hence did not eat very much. Gradually the nausea and vomiting disappeared. During 1906 she observed that her stools were occasionally bloody; she would have two or three stools a day, and about once every two weeks they were bloody. In November, 1906, the nausea and vomiting returned and continued at intervals until the spring of 1907. During the summer of 1907 the stools became more liquid in character, and practically always contained blood; they also became offensive. Tenesmus was never present. The patient suddenly felt a desire to go to stool; evacuation always brought satisfaction. Since January, 1908, the patient had been having six or eight stools daily; they were always offensive; sometimes a fairly well-formed stool was passed; stools always contained red blood; the patient never noticed that the stools were tarry. During the month previous to the consultation she had been feeling weak and tired out. She frequently felt nauseated and occasionally vomited. She craved a great deal of water; her mother stated that during the past two months she had been having an evening rise of temperature; she frequently felt very hot. At the time of consultation the patient felt exhausted, but ate whatever she desired. She had not had pain in the abdomen. The rectum felt very sensitive. The patient had lost weight; her appetite had always been good until recently.

Examination.—The very anemic and worn-out appearance of the patient was striking. Pulse was 90; temperature, 99.3. The respiratory tract was apparently normal. Musculature was good; the abdomen of normal contour. Nothing abnormal was found in the abdomen on palpation, except tenderness over the entire course of the colon from the ileocecal valve to the rectum. Rectal examination failed to reveal stricture or abnormal growth; it caused considerable pain. A specimen of stool was obtained. It was a reddish, brownish liquid and very offensive. On standing it quickly separated into an upper sanguinous, cloudy portion, and a lower thick, yellowish portion which looked like pure pus. The urine did not contain albumin or casts. Specimens of stool and of blood were sent to Dr. Fisch.

Diagnosis.—Patient was advised to go to the Deaconess Hospital and submit to a thorough examination under ether. Dr. Babler was asked to see her. The duration of the symptoms, the tenderness along the course of the colon, and the frequent offensive stools pointed to an ulcerative process in the colon. The age of the patient and the absence of tenesmus were confusing.

Surgical Part: Dr. Babler

Examination.—The principal finding was the marked tenderness over sigmoid and entire colon. Under ether the uterus and adnexa were found normal; the palpating hand could not find any abdominal tumor; the sigmoid and colon could be outlined without difficulty; digital examination found the rectum free from stricture and abnormal growth. The proctoscope was introduced; the mucosa was found intensely congested, and the seat of numerous small erosins; no tumor was visible. The sigmoidoscope was only partially introduced, because of the thickened, infiltrated condition of the rectum; we suspected an ulcerative colitis and were careful lest we caused hemorrhage or perforation. The mucosa was everywhere intensely congested; neither stricture nor polypi or other abnormal growths could be made out. Since the patient did not take the anesthetic very well, further investigation was discontinued.

Diagnosis.—I felt that Dr. Niebruegge's diagnosis was probably correct. The fact that the patient had never passed fleshy growths or noticed masses protrude from rectum, combined with our failure to find rectal or other growths, seemed to strengthen the suspicion that she had chronic ulcerative colitis. We thought that Dr. Fisch would throw some light on the subject; the duration of the illness seemed to exclude tuberculous colitis. Dr. Fisch reported marked leucocytosis; absence of tubercle bacilli and parasites in stools, but presence of large quantity of pure blood, epithelial cells and pus.

Treatment.—The usual treatment for chronic ulcerative colitis was instituted; the colon was irrigated daily with silver nitrate solutions, or 3 per cent. argyrol solution (one quart); bismuth subcarbonatis and phenylis salicylas were given by mouth, and only the least irritating food was permitted. In spite of the fact that restricted diet usually acts badly in these cases of ulcerative colitis, we deemed it best in our case owing to the nausea. The treatment did not benefit the patient; her stools became less bloody and frequent but more painful; she began to vomit and feel worse; temperature fluctuated between 99.5 and 103.8; pulse between 90 and 132. At the end of a week or ten days an appendicostomy was proposed. On the evening preceding the day set for the appendicostomy, symptoms of acute appendicitis appeared; vomiting was present and there was also marked tenderness over sigmoid and cecum. The patient also complained of pain in both the right and left anterior superior spine of ileum.

Operation.—The abdomen was opened at 8:30 p. m., through the border of the right rectus. The cecum and sigmoid were found intensely congested and considerably distended. The appendix was found lying behind the cecum; it was six inches in length, intensely congested, considerably thickened, and curled on itself; it was bound down by a very short mesoappendix. The entire colon was found free from palpable growth; a constriction could not be found; the walls were considerably thickened; mesenteric glands were not perceptibly enlarged. The uterus and appendages were normal. After carefully considering the findings it was decided to excise the distal five inches of the appendix, then draw the stump through a supplemental gridiron incision at McBurney's point, suture the peritoneum to the cecum, and the appendix stump to the aponeurosis of the external oblique and to the skin. This was done as quickly as possible; linen sutures were used. The primary incision was then closed in layers without drainage. Dressings were applied and the patient put abed.

Postoperative History.—Continuous normal saline solution per rectum was given according to Murphy's technic. The patient rallied better than we anticipated. On the day following the operation the artery clamp was removed from the tip of the appendix stump, and a large quantity of gas escaped. A quart of normal saline solution was introduced by means of a catheter in the lumen of the appendix stump. Two hours later the greater portion of it passed per rectum. These colonic flushings were repeated daily and seemed to benefit the patient. The appendicostomy wound served the double purpose of permitting gas (and occasionally feces) to escape through the catheter, and of allowing colonic flushings. Toward the end of the sixth day the patient began to fail; she felt nauseated and vomited; the stools again became very frequent and bloody; the patient looked very sick and exhausted. The temperature and pulse were markedly better until the sixth day. Gradually the patient became weaker and weaker, and died on the ninth day after the operation.

Autopsy.—The parents consented to a partial necropsy. The abdomen was opened one hour after death, through the primary incision at the edge of the right rectus. The peritoneum was everywhere pale and apparently normal. The appendicostomy wound had healed perfectly. The general peritoneal cavity was free from infection. The liver, stomach, kidneys and pancreas were apparently normal. The distal six feet of the ileum and the entire colon to the lower part of sigmoid were removed and opened. The entire colon from the appendix stump to upper part of sigmoid was thickened; polypoid growths of various sizes, from pea to small hickory-nut, were found scattered throughout the course of the colon. These growths were firm and seemed to be situated in the mucosa; the mucosa was everywhere congested and numerous submucous hemorrhages were noted. There were neither con-

strictions nor marked ulcerations present; in fact very few erosions were found. A few of the polypoid growths were of the long-stalked variety. The specimens were at once taken to Dr. Fisch, a summary of whose report is given below.

Pathologic Part: Dr. Fisch

A description of the microscopic findings in the material submitted to me, the macroscopic appearance of which is stated by Dr. Babler, would need far more space than is allowed for a clinical paper, in order to give proper weight to the great interest and pathologic importance of the condition. The detailed report will be published in a journal on pathology.

Microscopic Examination.—Microscopic sections revealed the carcinomatous character of the total number of the polypi; the type of this character was that of a malignant adenomatous state that resulted in invasion of the mucosa and submucosa, converting these tissues into a thick, hard layer, consisting of carcinoma tissue, all around the wall of the intestine. The upper layers of the submucosa and the mucosa were intensely

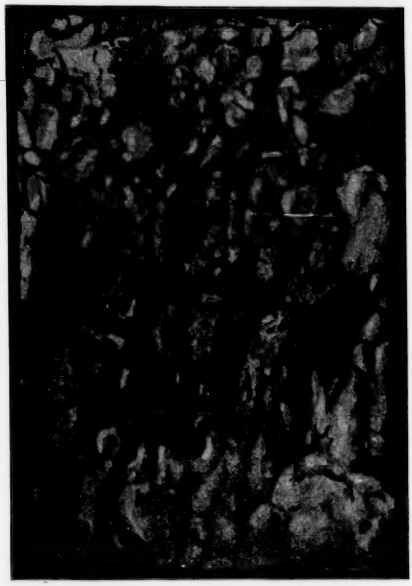

Fig. 1.—Portion of transverse colon (natural size).

infiltrated with inflammatory products, with plasma in preponderance. The intestine from the upper portion of the rectum to the distal part of the small intestine thus showed a uniform sheath of carcinoma between the muscular layers and the submucosal and mucosal layers. The two muscular layers were so far not involved, although in their lymphatic spaces many nests of carcinoma cells were present. The serosa was, as yet, intact; but considerably thickened. The condition obtained, too, for the appendix.

In no place of the whole tract could anything be found to suggest the presence of a primary tumor. The rectum, in its distal portion, was free from any tumor formation. All of the mesenterial glands examined were free from metastatic enclosures, and nowhere in the abdomen could a metastasis or tumor be found.

The uniform carcinomatous character of the glandular tissue has not been observed before, although partial foci of this form have been seen in a few cases of otherwise benign polyposis.

REMARKS: DR. BABLER

Carcinomatous polyposis of the colon must be regarded as of very infrequent occurrence. In carefully reviewing the available literature I have been able to find only a few cases. It must be admitted that carcinoma occurs more frequently during childhood and adolescence than we have heretofore appreciated. Phillips[1] has recently collected 390 cases of carcinoma during childhood. Creite[2] reported a case of cancer of penis at 2 years; Thompson's[3] patient with adenocarcinoma of breast was only 11 years of age. The patient in Clair's[4] historic first case of cancer of colon during childhood was 3½ years of age. Recently McWilliams[5] collected 90 cases of primary carcinoma of the appendix; in 60 per cent. of 78 cases the patient was under 30 years of age. Simple intestinal polyposis is apparently a disease of childhood; carcinomatous polyposis of the colon is perhaps a disease of adolescence and adult life.

Pathology.—Hauser[6] is a strong advocate of the theory that simple polypi of colon may become malignant. Meyer[7] holds that intestinal polyposis is con-

Fig. 2.—Vertical section from a small polypus (Leitz. Eyepiece 4, Obj. 3).

genital; Zahlmann[8] reported six cases occurring in one family; Cripps[9] and others have cited similar cases. Doering[10] has recently collected reports of fifty cases of intestinal polyposis; in 46 per cent. of the cases carcinoma was also present; in many of these latter cases the polypi were simple adenomata. In our case the polypoid growths were situated in the mucosa; all that were examined showed carcinomatous structures. In Petrow's[11] interesting case the patient presented symptoms of ileus; operation showed ileocecal intussusception apparently due to polypoid growths; at autopsy two additional intussusceptions were found;

1. Phillips: Ztschr. Krebsforsch., 1908, v, 326.
2. Creite: Deutsch. Med. Wchnschr., 1905, xxxi, 894.
3. Thompson: Brit. Med. Jour., 1908, ii, 502.
4. Clair: Oesterr. Ztschr. f. Kinderh., 1855, i, No. 2.
5. McWilliams: Am. Jour. Med. Sc., June, 1908.
6. Hauser: Deutsch. Arch. f. klin. Med., 1895, lv, 429.
7. Meyer: Inaug. Diss., Giessen, 1898.
8. Zahlmann: Jahrb. über die Leistungen u. Fortschr. d. ges. Med., 1903, i, 297.
9. Cripps. Tr. Path. Soc. Lond., 1882, xxxiii, 137.
10. Doering: Arch. f. klin. Chir., 1907, lxxxiii, 194.
11. Petrow: Abstr. in Centralbl. f. Chir., 1896, p. 542.

the intestine was found studded with polypoid growths; the growths showed incipient carcinomatous changes.

Simple polypi of the intestine are found most frequently in the rectum. Doering and others have reported cases in which rectal polypi were operated on and the growths found to be simple adenomata; several months or years later the patient returned with a carcinoma of the rectum; many of the polypoid growths in ascending, transverse and descending colon were found to be pure adenomata.

A striking feature of carcinomatous polyposis is the absence of metastases and of involvement of the mesenteric glands. We have collected reports of nineteen cases in which carcinoma of the colon and intestinal polyposis were present in the same patient; also reports of five cases in which the polypi showed carcinomatous changes. Multiple primary carcinomata of the intestine may occur. Bunting[12] has reported one case of multiple primary carcinomata of the small intestine and collected reports of five others from the literature. Billroth held that, in order to be multiple primary carcinomata, the growths should satisfy the following conditions:

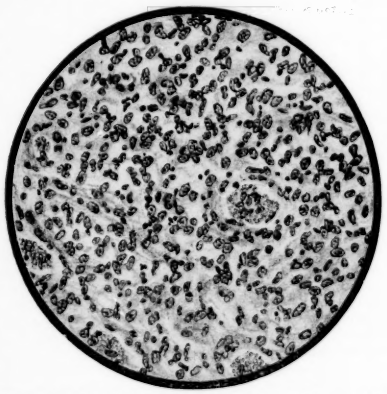

Fig. 3.—Portion of submucosal carcinomatous infiltration (Leitz, Eyepiece 4, Obj. 6).

1. Each must show a different histologic structure.
2. Each must be traceable histologically to the epithelium of its matrix.
3. Each must show its own metastases.

It is obvious that multiple primary carcinomata of the intestine will not conform to all of these requirements of Billroth, since they seldom or never produce metastases. In Bunting's case the nodules seemed approximately of the same age; each showed histogenic relation to the epithelium of the crypts of Lieberkuhn over it.

Symptoms.—Tuttle[13] has very fittingly said that the clinical manifestations of cancer of the colon vary according to the site, character and state of development of the malignant growth. He says: "Diarrhea or frequent desire to go to stool with no effectual result is the striking early symptom of cancer of the colon." In our case of carcinomatous polyposis of the colon the patient stated that evacuation of rectal content always brought comfort; tenesmus was never complained of. It must be obvious that the usual symptoms of cancer of the colon are not to be looked for in cases of carcinomatous polyposis of the colon, since the growths do not interfere with the normal outflow of intestinal content; they do not, as a rule, attain sufficient size to be palpable. The frequent, bloody, offensive stools, the progressive anemia, the gradual exhaustion, the age of the patient and the long duration of the symptoms seem to me to be very impressive. In Petrow's case the symptoms of ileus caused the patient to seek medical aid. Forster's[14] patient died from tuberculosis; autopsy showed polypoid growths scattered throughout the course of the colon; the polypi showed carcinomatous change. In our case the afternoon rise of temperature was apparently due to absorption of septic material in the colon.

So few cases of carcinomatous polyposis have been reported that it is difficult to do more than cite the symptoms present in these reported cases.

Diagnosis.—The mere fact that a young person has had a bloody, more or less offensive diarrhea for months

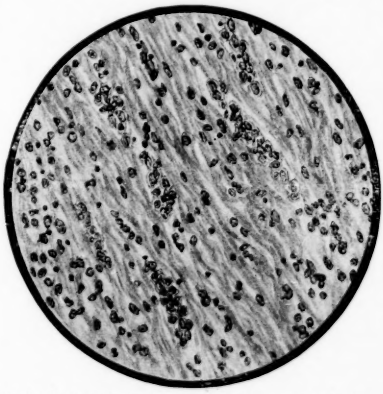

Fig. 4.—Section of circular muscular layer; nests of carcinoma in lymphatic spaces.

or years should at least arouse a strong suspicion of intestinal polyposis. The age of the patient and the long duration of the colitis are regarded as characteristic of intestinal polyposis. Frequent bloody stools and progressive anemia occurring in a young person should arouse suspicion. When the rectoscope and sigmoidoscope fail to clear up the diagnosis, and when the stools contain pus, intestinal débris and blood only, it is reasonable, after making a thorough examination under ether, to suspect malignancy. The diagnosis of carcinomatous polyposis of the colon may be practically impossible. In many cases, however, the finding of fleshy masses in the intestinal excreta will clear up the diagnosis. An exploratory laparotomy is preferable to prolonged doubt and delay. Bunting and others have shown that multiple carcinomata of the small intestine do not usually cause clinical manifestations. In tuberculous ulceration of the colon the symptoms do not

12. Bunting: Johns Hopkins Hosp. Bull., 1904, xv, 389.
13. Tuttle: N. Y. State Jour. Med., 1902, p. 169.
14. Forster: Rev. med. de la Suisse, Rom., 1903, xxiii, 362.

persist so long; the clinical picture differs quite materially.

Treatment.—If the diagnosis could be made before the patient is too exhausted, and if the growths were limited to the ascending, transverse and descending portions of the colon, it is probable that an intestinal exclusion would be advisable; the excluded portion could be excised at a second operation. Rotter[15] did an intestinal exclusion in his case, but the patient was too exhausted and septic to survive. Margarini[16] made a cecal colostomy, but the patient did not improve; he then removed as many of the rectal tumors as was possible, and closed the colostomy wound; the patient recovered; the polypi did not show malignant changes. Von Black[17] was the first to call attention to the two-stage operations in cancer of the colon. Petermann[18] has recently stated that primary resection of the colon with suture has a mortality of 50 per cent.

In our case an appendicostomy was performed, since we were of the opinion that the patient had chronic ulcerative colitis. Tuttle[19] has recently collected reports of 77 cases in which an appendicostomy, as first recommended by Weir[20] in 1902, was performed. The results in chronic ulcerative colitis have been quite satisfactory. It does not seem possible that the operation could be of any great value in carcinomatous polyposis of the colon.

REPORTED CASES

Below will be found synopses of six cases which are somewhat similar to our case; in my opinion, Cases 3 and 5 are to be considered as especially so.

1. BARDENHEUER'S CASE.[21]—The patient, a man aged 48, had had pain in the abdomen for one year, and pain on defecation. Examination showed cancer of rectum. The growth was excised. Autopsy showed polypoid growths of various sizes scattered throughout colon. Microscopic sections showed all the growths to be carcinomatous. Bardenheuer questions whether the rectal growth or the polypoid growths were primary.

2. HANFORD'S CASE.[22]—The patient, a woman aged 34, died of adenocarcinoma of the rectum. Autopsy showed metastases in liver; the colon was studded on its inner surface with polypoid growths of various sizes; about the middle of the transverse colon was a polypus the size of a walnut which had caused a stricture; the mesenteric and lumbar glands were not much enlarged. The polypi showed incipient malignant change. Hansford contended that his case demonstrated the possibility of simple polypi becoming malignant. (The growths were malignant adenomata.)

3. PETROW'S CASE.—The patient, a girl aged 20, had symptoms of ileus. Operation showed ileocecal intussusception. Resection was done and the patient died. Autopsy showed two other intussusceptions, one in the jejunum and one in the ileum. Polypoid growths were found in both small and large intestine. The intussusceptions were due to polypi. Microscopic sections of the polypi showed incipient malignant changes. There was neither stricture nor large carcinomatous mass present; metastases were not found.

4. HAUSER'S CASE.—The patient, a man aged 33, had had diarrhea and pain in the abdomen for eleven years. Stools were offensive. Examination showed cancer of the rectum. Autopsy showed polypoid growths of various sizes in stomach, small and large intestine. The polypi were found to be malignant. Hauser contended that his case coincided with that of Bardenheuer. Hauser has cited two cases in which polypi and carcinoma were present in the same patient.

5. FORSTER'S CASE.—The patient, aged 23, died from tuberculosis. Autopsy showed circular cancer of colon and multiple polypoid growths in colon. The polypi showed evidences of malignant changes.

6. DOERING'S CASE.—The patient was a boy, aged 16, whose mother and uncle had died from a cancer of rectum. The patient had been complaining of painful defecation followed by protrusion of a fleshy mass. Examination showed polypi in the rectum. Doering removed as many of the polypi as was possible; he found that the sigmoid was also the seat of the growths. Microscopic sections of polypi showed them to be simple adenomata. Three years later the patient returned; examination showed cancer of rectum. An artificial anus was made; the patient died. Autopsy revealed carcinoma of rectum and of hepatic flexure; four carcinomatous growths in colon; polypoid growths of various size were also present in colon. Some of the polypoid growths were found to be simple adenomata converted into malignant adenomata; many of the polypoid growths were pure adenomata. In the rectal growth the conversion of simple into malignant adenomata seemed clear.

4826 Delmar Ave.—2003 Salisbury St.—3212 Pine St.

15. Rotter: Arch. f. klin. Chir., 1898, lvii, 357.
16. Margarini: Clinici Chir., 1903; Refer. Hildebrandt's Jahresbericht, 1903, p. 556.
17. Von Black; Cited in Petermann: Arch. f. klin. Chir., 1908, lxxxvi, 52.
18. Petermann: Arch. f. klin. Chir., 1908 lxxxvi, 52.
19. Tuttle: THE JOURNAL A. M. A., 1906, xlvii, 426.
20. Weir: Med. Rec., 1902, lxii, 201.
21. Bardenheuer: Arch. f. klin. Chir., 1890-1, xli 887.
22. Hanford: Tr. Path. Soc., Lond., 1890, xli, 135.

PARALYTIC ILEUS

WITH REPORT OF TWO CASES SUCCESSFULLY TREATED BY OPERATION

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Surgeon to St. Joseph's Hospital
CHICAGO

Every operator of much experience in abdominal surgery has met with the distressing postoperative condition of abdominal distention the degree of which may range anywhere from a mere accumulation of gas in the intestine, causing only slight distress, to a well-developed condition of ileus, with impending death. During the past eighteen months two patients with such conditions have presented themselves for operation on my service at St. Joseph's Hospital.

Before entering into a discussion of the two cases under consideration it may be well to make a few remarks regarding the general subject of ileus. A review of the literature on this subject shows that volumes have been written, and that the term used without qualification leads to endless confusion, since it designates only a syndrome and describes no definite morbid condition. It will be well, therefore, in using the term to qualify it with some term which will, in a measure, at least, indicate the specific pathology. This paper deals with paralytic ileus, which may be divided into dynamic and adynamic forms. Paralytic ileus of both types is an interference with peristalsis caused by a disturbed innervation of the intestine, as opposed to mechanical ileus, which is a form of intestinal distention brought about primarily by some actual physical obstruction of the bowel.

Experimental investigation into the influences of the innervation on intestinal movements have proved uncertain, but Pflüger established, by a series of investigations, the following facts: The vagus nerve innervates the entire small intestine and the irritation of its fibers either causes movements throughout the small intestine or increases peristalsis. Irritation of the splanchnic nerve, on the other hand, tends to inhibit movements of this portion of the intestinal tract and also causes

anemia of its blood vessels, while the division of these same nerves causes a hyperemia.

It would be interesting—in fact, of vital importance to surgeons and clinicians alike—to establish by a series of experimental investigations the relation between the effects produced on the central and sympathetic nervous systems by autointoxication following certain abdominal operations, on the one hand, and the pathologic conditions which occur in the intestinal wall, on the other.

The question whether paralytic ileus is caused by a disturbance in the anterior cornual cells and their corresponding sympathetic ganglia giving origin to the fibers of the splanchnic nerves, or whether the disturbance takes place in the sympathetic plexuses of Auerbach, Meisner and Billroth in the intestinal wall will furnish an interesting and important field of investigation.

I hope to throw some light on this subject by reporting at a later date the results of some experiments which are under consideration at the present time.

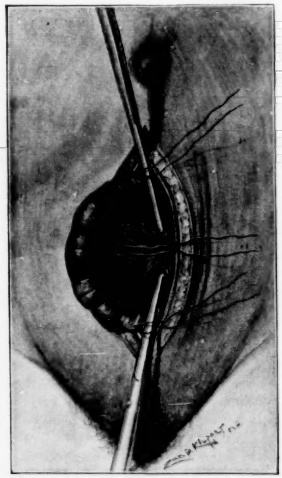

Fig. 1.—Loop of intestine clamped off and the four anchor sutures to the fascia in place.

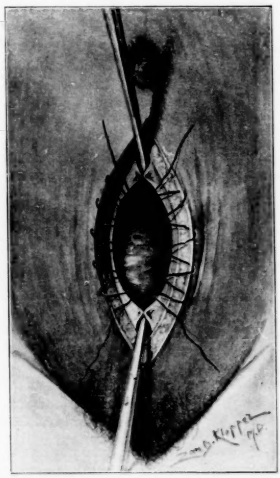

Fig. 2.—Cut edge of the skin approximated to the bowel by means of a row of Lembert sutures.

Fig. 3.—Two rectal tubes introduced into the bowel, the upper into the proximal portion, and the lower into the distal.

REPORT OF CASES

CASE 1.—*Patient.*—Mrs. R., a short plethoric individual, aged 49. The physical examination revealed the following condition: The abdomen markedly distended and as tense as a drum; there was a decided tenderness at McBurney's point; pulse was 110; temperature, 100 F. The abdomen showed a small ventral hernia which stood out very prominently in this tympanitic condition. There was a history of two distinct attacks of appendicitis, at which times the patient was seen by a competent surgeon who made that diagnosis. The patient was sent to the hospital with instructions that a movement of the bowels should be secured, if possible, before operation. At the hospital that night the patient was given a cathartic and an enema, and at 12:30 a. m. passed considerable gas as a result of the latter.

First Operation.—The following morning the patient was in better condition and it was decided to operate that day. This was done at 10 a. m. When the abdomen was opened in the median line below the ventral hernia and the field inspected, a moderately inflamed appendix bound down by a few adhesions was found. In the folds of the mesenteriolum of the appendix was found a large mass of fat resembling a true lipoma, which is mentioned here because the operator had never before met with that condition. As the operation did not take more than thirty minutes, the hernia was repaired, the entire operation requiring not more than one and one-half hours. The patient was returned to her bed in good condition.

Second Operation.—The patient received the ordinary after-treatment for laparotomies; yet she continued in a tympanitic condition for the following thirty-six hours, at which time her symptoms became so alarming (her pulse going to 162 and her temperature to 103 degrees, with respirations at 46, and the beginning of stercoraceous vomiting) that it was very evident that she could live not more than a few hours unless the distention could be immediately relieved. After a hurried consultation with my brother I decided to operate at once. After a short preparation the old incision was opened, no anesthetic being given until the peritoneum was reached, when gas was administered followed by a few whiffs of chloroform. The peritoneum was quickly incised and the first loop of the intestine that presented itself was picked up. There were no signs of peristalsis, consequently only a small amount of gas escaped when the bowel was opened. The technic of this operation follows later in the paper. Irrigation with salt solution directly into the bowel was begun immediately and was continued for thirty minutes. It was noted that gas and fecal matter continued to escape with the irrigation, consequently this treatment was repeated at intervals of two hours. The patient was returned to her bed and given the ordinary postoperative treatment.

Forty-eight hours passed before the bowel gained its normal peristalsis, then the patient made a very good recovery.

CASE 2.—*Patient.*—Miss G., entered the medical service of St. Joseph's Hospital, Nov. 5, 1908, with a history of gallstone colic, one attack having occurred two and a half years previously. The patient had been suffering from the present attack for eight days, and presented the following conditions on physical examination: marked jaundice; extreme tenderness over the gall bladder region; pain shooting to the back and radiating to the right shoulder; vomiting; temperature 103 degrees, and pulse 120. There was a marked leucocytosis.

First Operation.—It was apparent that an operation was imperative. Consequently the patient was sent to the operating room and no time was lost in opening the abdomen and exploring the gall bladder, which was found to be markedly distended, with walls considerably thickened. On account of the inflammatory adhesions between the gall bladder and the surrounding viscera some time was consumed in controlling the hemorrhage. This complication necessitated concluding the operation hurriedly as the patient was in a very weak condition. The gall bladder was opened in the ordinary way, no time being taken to explore the interior; and a large tube was inserted after the Mayo plan. The patient was then dressed and returned to her room in a fair condition.

Postoperative History.—She made a good recovery and continued in a good condition, the temperature and pulse being normal and the bowels moving every day for the following five days. Dr. Alice Hamilton, of the Memorial Institute for Infectious Diseases, Chicago, who is investigating the subject of typhoid carriers with special reference to the gall bladder infections, examined this patient on the fifth day after the operation and found the paratyphoid organism in pure culture in the blood. On the evening of the fifth day after the operation the patient had two chills with a rapid rise in temperature and pulse so that on the following morning she presented the picture of profound collapse. In this condition she remained until the evening of that day, during which time the abdomen gradually became markedly distended. Repeated attempts to move the bowels both by catharsis and enemas proved futile. At 6 o'clock that evening the patient seemed in a dying condition. Dr. Arthur A. Small was called in consultation and, after a hurried examination, approved the proposed procedure for the relief of the ileus. The clinical chart at this time showed the pulse to be 156 and the temperature 103.5. There was also stercoraceous vomiting. The patient was sent to the operating room and the operation was performed under cocain anesthesia. The patient had an uneventful recovery, save the irritation occasioned by the fecal material passing out on the abdomen.

TECHNIC OF THE OPERATION

The choice of an incision depends somewhat on the site of the incision of the original operation. Under most circumstances the first incision may be used for entrance into the abdomen, thus lessening the pain and the shock to the patient. The location of choice, however, is in the median line midway between the umbilicus and the symphysis pubis, for in this region a loop of the intestine near the lower end of the jejunum or the beginning of the ileum can be most readily picked up.

In other words, the operator attempts hurriedly to select a point in the small intestine approximately midway between the pyloric end of the stomach and the ileocecal valve. The distended loop of bowel is brought up through the abdominal wall and the distention reduced by stripping the intestine either way and applying a rubber-mounted intestinal clamp at the upper and lower angles of the wound, thereby collapsing the intervening portion of the bowel and reducing it to a condition so that sutures may be affixed without perforation.

Experience in handling these two cases has demonstrated, contrary to the teachings of many text-books on surgery, that but little gas escapes when the bowel is opened. Consequently great stress is placed on the introduction of long tubes into the intestine, as by this arrangement the irrigating solution performs a double rôle. First, the solution by entering the bowel at a considerable distance from the opening mechanically forces the gas and fecal matter to escape. Second, the introduction of the saline solution into this portion of the intestine with its rich supply of lymphatics acts as an immediate and powerful stimulant.

The after-treatment in such cases consists in sustaining the patient by rectal feeding for one week, at which time this feeding is supplemented by liquid diet by mouth, and this form of treatment is continued for a period of several weeks until the patient has regained sufficient strength to undergo an operation for the closure of the intestinal fistula. The feeding by mouth is discontinued for a week previous to the operation and the intestine carefully irrigated with an antiseptic solution.

The operation for the closure of the fistula consists in the resecting of five or six inches of the intestine and bringing the bowel together by means of a lateral anastomosis.

The treatment of paralytic ileus accompanying typhoid fever by this method has been suggested because of the parallelism of that disease and Case 2 in this paper. From the bacteriologic investigation of cholecystitis it would seem logical to conclude that the paratyphoid organism isolated from the blood of this patient by Dr. Hamilton may have remained latent in the gall bladder from the time of this patient's first attack until the date of this operation, at which time the disturbance set up in the gall bladder by the operation caused the organism to invade the blood, producing paratyphoid septicemia which in turn, just as in typhoid fever, may have been responsible for the paralyzed condition of the bowels in this case.

CONCLUSION

This mode of treatment, *per se*, is attended with grave danger and should be resorted to only after every effort by medicinal means has proven futile, but is apparently indicated in extreme cases in which death seems impending as sometimes occurs in the following conditions: (a) paralytic ileus following operations; (b) abdominal distention caused by suppurative peritonitis; (c) extreme paralytic ileus accompanying typhoid fever; (d) injuries to, and diseased conditions of, the spinal column producing a paralyzed condition of the intestines.

100 State Street.

THE POLLUTION OF STREAMS BY DISTILLERY WASTE

WITH SPECIAL REFERENCE TO LEPTOMITUS LACTEUS *

MARSHALL LANGTON PRICE, M.D.
AND
WILLIAM ROYAL STOKES, M.D.
BALTIMORE

The pollution of streams by distillery waste is, in the United States, a comparatively recent problem. Changes in the condition of the liquor trade have brought about the concentration of distilleries around cities and thickly settled communities, where they give rise to nuisances, the character and severity of which are governed mainly by the process employed and by the size of the stream into which the waste is emptied. The pollution of water courses in one way or another is certainly one of the most serious and important problems with which the health authorities have to deal. This is probably the only sanitary problem in which public opinion and the law have kept pace with scientific progress. The riparian rights of owners have been jealously guarded by the common law for several centuries and

* Prepared for, but not read before, the Section on Hygiene and Sanitary Science of the American Medical Association, Chicago, June, 1908.

have been affirmed by statutes in many of the states of the Union.

THE LEGAL ASPECT

The common law proposes that the owner of riparian rights shall have guaranteed to him not only the quantity of water which is necessary for his purposes, but also that its quality shall be unaffected, or, as the law has affirmed on several occasions, "the right of a riparian owner to have the water of a stream come to him in the natural purity or in the condition in which he has been using it for purposes of his domestic use or of his business is as well recognized as is his right to have the flow to his land in its usual quantity."[1]

An abstract from the opinion of Judge Magruder of the decision of the Court of Appeals of Maryland in the case of Wm. E. Woodyear vs. Henry Shaefer, April term, 1881, is worthy of quoting, as it specifically demolishes all of the ground on which the pollution of a stream is generally maintained. The following points are especially important: "There can be no prescription for a public nuisance." "Where any prescriptive right to pollute a stream has been gained it can only be maintained to the extent that it is shown to have injuriously affected the interest complaining." "It is no answer to a complaint of nuisance that a great many others are committing similar acts of nuisance on the stream; each and every one is liable to a special action and to be restrained." While this decision in the case of Woodyear vs. Schaefer holds the specific nuisance at

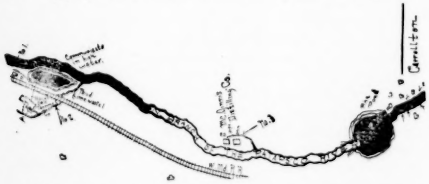

Fig. 1.—Sketch map of the North Branch of the Patapsco River (not drawn to scale), showing the R. Tannery, the M. Distillery and the town of Carrollton. The arrows and numbers indicate where specimens were taken.

issue, namely, a slaughter house, to be *prima facie* a nuisance, and it is held that blood running into a stream constitutes a nuisance that will be restrained, it is not held, so far as I know, in any court, that distillery waste is *prima facie* a nuisance, and it is necessary to show in any specific case that such waste does cause a nuisance.

The decisions quoted refer mainly to suits in equity or to injunction proceedings to restrain a nuisance. Evidently this is not sufficient, however, in the pollution of streams where so much serious damage to health, comfort or property may exist, and the laws of Maryland make the pollution of streams a misdemeanor, punishable by fine or imprisonment, and similar statutes exist in other states. These statutes do not specifically refer, however, in general, to distillery waste. Hence in the specific case which we describe it was necessary to show, first, that the stream in question was polluted and rendered unfit for drinking or domestic purposes; second, that the distillery waste in question was the cause of such pollution either in whole or in part. With this review of the general legal principles involved in the pollution of a stream, we may pass to this specific case, which is of particular interest on account of the fungus growth causing the pollution and of its direct dependence on the distillery waste.

POLLUTION OF THE PATAPSCO RIVER

During May, 1907, the secretary of the State Board of Health of Maryland, one of the authors of this paper, received a petition from 124 residents of some two or three small towns along the bank of the Patapsco River of Maryland to restrain the M. Distilling Company and the R. Tanning Company (Fig. 1) from discharging their waste into the stream, alleging that a serious nuisance was being produced by these two corporations. An inspection of this stream was made about the 1st of May with the county health officer, beginning with the tannery and following the stream down about three miles through two or three small villages. The water beginning about one-half mile below the tannery became black from the lime and tan bark discharged from the tannery and continued so for a distance of two or three miles. At the site of the distillery a frothy white liquid ran into the stream without producing any perceptible change. About a quarter of a mile below this point, however, there was a very perceptible odor, which increased in intensity as we descended the stream. At a pond furnishing power for a flour mill a number of dead fish were seen on the surface, and at a small town, below, the fungus which we describe appeared in great quantity along the bottom and sides of the river and at the race leading into the flour mill.

The odor along the banks of the stream was perceptible for several hundred feet back and was almost intolerable at the flour mill. The fungus accumulated at this place and had to be removed with a rake or shovel, and there must have been 100 pounds removed daily. In the stream the fungus could be seen adhering to the banks or growing from sticks like sponges. The free filaments gave a beautiful feathery appearance to the growth when floating in the water. The specimens when removed collapsed in a gelatinous mass and gave forth the most remarkably putrid, acrid and nauseous odor which we have ever experienced. The specimens were taken from this point and sent to the bacteriologic laboratory for examination. An opinion was delivered on this nuisance to the county health officer on May 6, 1907. The following are the main points as regards the M. Distilling Company:

First, that the said firm or corporation is situated on the Patapsco River near Carrollton, and that it is engaged in the manufacture of rye whisky.

Second, that the firm, in the manufacture of rye whisky, causes a mash of rye and water with yeast or some other ferment to ferment in large tanks or vats to produce alcohol and other extractives, giving the whisky its essential flavor and properties.

Third, that the firm causes its mash when fermented to be distilled at a low temperature to produce whisky.

Fourth, that the firm causes the residuum of the mash remaining after distillation to discharge through an open drain into the waters of the north branch of the Patapsco river at a distance of about 100 yards.

Fifth, that the waste material discharged from the drain of the firm has a sour, penetrating and disagreeable odor.

Sixth, that the waters of the north branch of the Patapsco river have, at Carrollton, at some distance above and below, a sour penetrating and disagreeable odor.

Seventh, that the M. Distilling Company has violated the provisions of Section 429 of Article 27 by permitting

1. Wood on Law of Nuisance, Sec. 677; Gladfelter vs. Walker, 40 Md. 1; Wood vs. Sutt 11%, 2 Sim N. S. 163; 8 Eng. Law and Equity 217; Stockfort Water Works Co. vs. Potter 7, H. and N. 159.

offensive matters to flow from the distillery of the said company into the north branch of the Patapsco river, thereby causing pollution of the stream.

The following extracts are taken from the general opinion in regard to the nuisance:

That the waters of the Patapsco river have continuously, or at intervals, an offensive odor from a point a short distance below the plant of the M. Distilling Company to and below the town of Carrollton.

That the waters of the Patapsco River contain between the points specified in Section 2, a growth of the nature of algæ of penetrating and offensive odor.

That the waters of the Patapsco river have been habitually used for domestic purposes until they became fouled and polluted and unfit for domestic use.

Representatives of the corporation and petitioners were heard before the State Board of Health on June 12, and on June 13 orders were issued to the M. Distilling Company, through the president and general manager, enjoining them and all other officers, agents, employés or stockholders of the body corporate against causing, allowing or permitting any of the waste from their distillery to flow, directly or indirectly, into the Patapsco River after June 23, 1907. The distilling company shut down about June 20, a few days before the order went into effect.

On July 5 we visited the distillery to determine whether the orders of the board had been complied with and also to investigate the condition of the stream since the polluting materials had been withdrawn. We inspected the stream for about two miles and took frequent scrapings from the bottom with a long rake. We found this particular fungus had completely disappeared in the short interval since the shutting down of the distillery plant. We found a few fungi of the common variety, mostly chlorophyl-bearing algæ, without unpleasant odor excepting a slight fishy smell. Some of the peculiar characteristic odor remained in the deep scrapings from the bottom. The disappearance of algæ was so complete that we were unable to obtain any specimens for examination. The citizens along the bank reported the stream free from odor.

NATURE OF THE WASTE

Distillery waste is a yellowish-white, opaque liquid with a spirituous or yeasty odor and slightly acid reaction, due to acetic acid. In about twenty-four hours the reaction becomes alkaline. As appears in the analysis, it contains a very large quantity of nitrogen and

ANALYSIS OF SAMPLE MARKED "X———— DISTILLING COMPANY."

(All figures expressed in parts per million.)

Color	Yellow
Odor	Spirituous
Total solids	17,990
Ignited or mineral solids	1,896
Volatile and organic solids	16,094
Chlorin	20.5
Nitrogen as free ammonia	8.33
Nitrogen as albuminoid ammonia	18.76

shows that the organic matter has only partially been exhausted by fermentation. The chemical analysis does not show why this material should be so favorable to fungus growth and particularly to the *Leptomitus lacteus*. Apparently the conditions under which this fungus grows are more or less delicately balanced. Too great or too little a dilution will apparently prevent its growth. In this particular instance the fungus did not appear until the stream had flowed about one-quarter of a mile beyond the distillery outlet. Since the dilution progressively increases in any stream, we would expect to see the fungus appear in small streams in some part of their course, but, on the other hand, if the waste was discharged at once into a large body of water the dilution would probably be too great to favor the growth of the *Leptomitus*. In a small stream such as this the only means that could be suggested would be to completely dry and dispose of the waste or by aseptic tank process carry the fermentation process to a complete stage of decomposition. Attempts to cultivate the fungus have been uniformly unsuccessful, though during June we attained partial success by some experiments carried on at room temperature. Evidently it was necessary in this instance to obtain corroborative evidence that the growth of the *Leptomitus* was dependent on the distillery waste and not on the discharge from the tannery or a mixture of the two

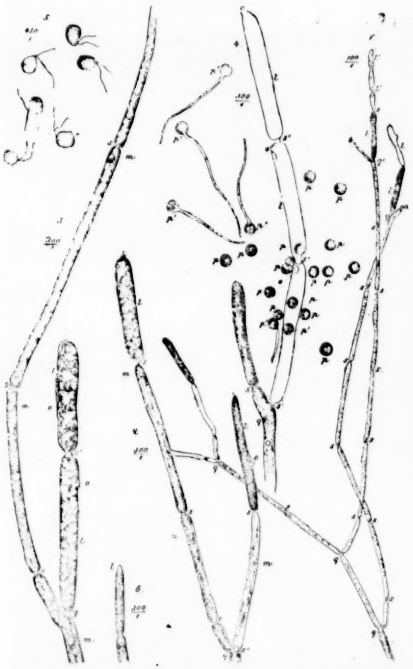

Fig. 2.—Photograph copied from *Jahrbüch. f. Wissenschaftliche Botanik*, vol. ii, 25, showing different conditions of *Saprolegnia lactea*. m, nuclei at the joints; s, the constrictions; p, spore swarms at rest after evacuation from the Sporangium; p', young spores producing "Schlauchen" or hyphæ. At e' (1) a few spores are seen in the sporangium. At s' (4) the nuclei close the constrictions and form the partition walls of the joints.

wastes. Experiments were made with two samples of tannery waste, Specimen 1 and Specimen 2, and with distillery waste, Specimen 3. Dilutions were made in ordinary fruit jars as follows: Tannery Specimen 1, two samples, dilution 1 to 500 and 1 to 5,000; tannery Specimen 2, same dilutions; Distillery Specimen 3, two samples, same dilutions. We then had six jars containing two different kinds of waste, diluted in proportions of 1 to 500 and 1 to 5,000. Six additional samples were then prepared by mixing equal parts of the 1 to

500 distillery waste with tannery Specimen 1 and Specimen 2 separately and with equal parts of the mixture of Specimen 1 and Specimen 2, the samples being in 1 to 500 dilution, and a similar set of samples were prepared in 1 to 5,000 dilution.

A portion of the fungus was removed by the point of a paper knife and washed off by movements of the

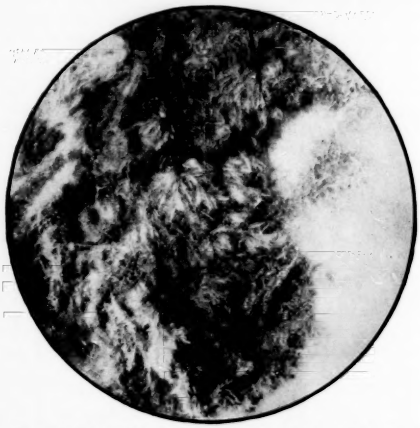

Fig. 3.—Photograph of gross specimen showing its shaggy, coarse, hair-like appearance.

knife in the fluid. The odor soon disappeared from the jars, excepting a slight leathery odor in those containing tannery waste. At the end of three days the characteristic odor reappeared in the inoculated jar

Fig. 4.—The fungus under a low magnification, and the central large stem containing numerous smaller branches is well demonstrated.

containing the unmixed but diluted distillery waste. This was only plainly perceptible in the 1 to 5,000 dilution, and in this jar evidences of growth could be plainly perceived in new filaments springing off from the original material. None of the other samples containing tannery waste alone or mixed with distillery waste showed any evidences of growth.

It appears, therefore, from this partially successful experiment that a high dilution is necessary and that the products of the tannery inhibited the fungus. It remains to explain the universal disappearance of the *Leptomitus* when cultivated *in vitro*. Either the fungus exhausts its own nutriment and in a very short time ceases to grow or else, which seems more probable, some of the products of growth are toxic to the fungus, and its reproduction ceases on account of a species of autointoxication. We believe that both of these conditions can be met successfully, and if we are able to secure any more of the fungus we propose to treat it by continuous irrigation with diluted distillery waste, allowing the material constantly to siphon into the jar and overflow. In this way we could reproduce very closely artificially the conditions in which the fungus is found in the streams. One of the interesting phases of the joint association of this fungus and distillery waste in streams is the destruction of fish. This generally appears to kill only a certain proportion of fish and not to destroy all of those in the stream. While we have obtained dead fish and subjected them to au-

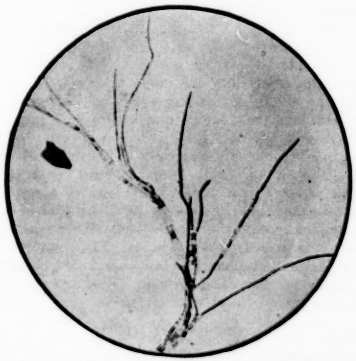

Fig. 5.—This shows a specimen dried and stained by hematoxylin. The dichotomous branching from the parent stem is clearly seen.

topsy, we have been unable to determine the cause of their death. Whether it is due to poisonous products of the fungus or its growth within or on some part of the fish, we have been unable to ascertain, but that it is due to the distillery waste in this instance can scarcely be doubted, as experiments *in vitro* with the tannery waste on living fish have been without result.

THE SAPROLEGNIÆ

According to Pringsheim[2] the *Saprolegniæ* form a subdivision of the *Algæ*. They are often found in water attached to animal or vegetable materials forming growths radiating from all sides of their host, their straight or branched hyphæ often penetrating deeply into the material, such as a stick or stone. Their protoplasm does not contain any chlorophyl or starch. Pringsheim thinks that they belong to the *Algæ* since they form spore-swarms, and no true moulds do this, and the formation of generative cells and the alternating sexual and asexual generation places them in near relationship to the *Vaucheriæ* and *Confervæ*.

2. Jahrbücher für wissenschaftliche Botanik, Berlin, 1858., i, 284.

As mentioned above the *Saprolegniæ* have a double cycle of development; a sexual and an asexual generation. The asexual growth begins by one of the hyphæ cutting itself off from the main stem by transverse fission and forming the so-called mother cell of the swarm of spores. The protoplasm divides into a large number of spores, which soon escape from the sporangium. Another hypha grows from the emptied spore-sac, and so the growth progresses. The spores are motile and have cilia which propel them through the water.

The most important part of the sexual apparatus of the *Saprolegniæ* consists in the female sexual organ, or the oögonium, which forms the oöspores. These oögonia are developed from special branches which grow from the sides of the main hyphæ, and are later cut off and form the female organ. Certain clear spots appear in the protoplasm and the wall later is absorbed at these points and these orifices admit the spermatozoa.

Coincident with the changes just described a gradual separation of the contents of the oögonium takes place, which results in the formation of a number of masses of protoplasm which form the ova ready for fertilization. The protoplasm forms itself into globular shapes which form the daughter cells of the structure. In some of the forms of *Saprolegniæ* branches grow out from the stalk of the oögonium, which grow around and even cling to the outside of the female sexual organ. These

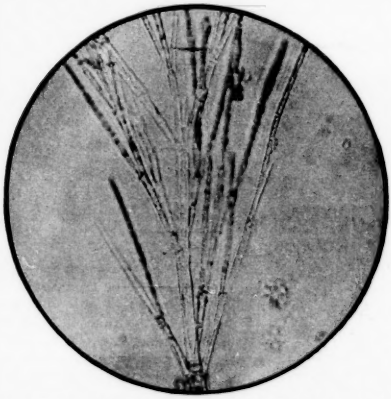

Fig. 6.—This shows the branching end filaments when photographed from a fresh specimen.

branches are called antheridia, and they penetrate the perforations in the wall of the oögonium and probably fertilize the immature ova by means of spermatozoa. These spermatozoa are embedded in the antheridia, surrounded by a mucoid material; after they have entered the protoplasm of the female element they appear as fine refractive bodies which soon mix with the substance of the protoplasm of the female element. Following this act the oöspores are formed which are the lasting seeds of this species.

In some species of *Saprolegniæ* such as *Saprolegnia ferox*, these antheridia are not formed, and the spermatozoa are derived from egg-shaped cells which form at the end of hyphæ. A large number of small motile branches which rupture the mother cell become free later in the surrounding medium. They have cilia and are spermatozoa derived from these special antheridia. In summing up the characteristics of the *Saprolegniæ* the following résumé is given by Pringsheim:

"The *Saprolegniæ* are cryptogamic, colorless, parasitic water plants belonging to the division of the *Algæ*. The vegetative parts are formed from a single many-branched mycelium. Many spore-swarms form at the ends of the cut-off hyphæ, which spores have one or two cilia. Oögonia are formed from the thickened ends of short side branches which contain many openings. Antheridia are single-celled, and are formed by side branches from the stem of the oögonium. These antheridia contain many small rod-like spermatozoa. Oöspores are formed which later grow to hyphæ or form spore-swarms."

LEPTOMITUS LACTEUS

The organism which infected the stream is one of the *Saprolegniæ*, and belongs to the genus *Leptomitus*. Dr. Karl F. Kellerman, physiologist in charge in the Bureau of Plant Industry, U. S. Department of Agriculture, to whom we are indebted for a diagnosis, thinks that it is probably the *Leptomitus lacteus*, and a brief description of this organism is therefore in order.

The *Leptomitus lacteus* was first described by Agardh[3] in 1860, and later by Pringsheim[4] more thoroughly. According

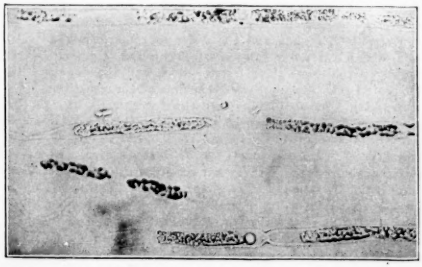

Fig. 7.—Two groups of three spores each, showing the granular protoplasm of the spores.

to this author this plant only occurs in the flowing water of small or large streams, occurring in winter as well as in summer. It forms either small or large masses of a dirty white material often spread over extensive areas. The filaments are often several inches long, and often cover the surface of the water, as well as every root or branch of a tree or large stone in the water. They form long, floating, slimy masses resembling wool spread over these various surfaces.

Under the microscope the plant shows dichotomous branching with slight constrictions which resemble joints. They are not true joints, however, and the entire plant is continuous and unicellular. Either one or several nuclei are often found near these constrictions. In young hyphæ the nucleus is

Fig. 8.—This shows the individual hyphæ under the high power. The constriction with the nucleus adjacent is quite apparent, and the granular protoplasm alternating with the clear hyaline contents of the filament is clearly indicated.

homogeneous, but in old ones it may show several concentric layers. New branches are formed by the growth from the point or end of a branch or by side branches. These younger branches are smaller than the parent branch at first.

The formation of sporangia is accomplished by a swelling of one of the end hyphæ, its protoplasm increases, and by transverse fission it cuts itself off and forms a complete single cell. This soon forms a sporangium in which the protoplasm begins to heap up in a manner similar to that described above in the other *Saprolegniæ*. This process ends in the formation of

3. Syst. Alg., p. 50, Kützing, Species Alg. p. 155, Dilhoyn's British Confervæ, 1809, Tab. 79.
4. Jahrbücher für wissenschaftliche Botanik, Berlin, 1858, ii, 205.

motile bodies which form swarms of spores. These spores measure 1/86 of a millimeter in diameter and have two cilia, and hyphæ soon grow from these spores and thus continue the species.

The organism is very difficult to cultivate artificially, often dying out several hours after transplantation, but its life may be prolonged by adding insects to the water. Pringsheim could not observe the formation of sexual organs under these conditions. By supplying fresh water frequently he grew the plant for one week. He was never able to find oögonia or antheridia in this fungus. We obtained large quantities of the organism on two separate occasions from the stream, and on microscopic examination they both corresponded in all of their characteristics to *Leptomitus lacteus* as described by Pringsheim.

Figure 2 is a photograph of Table XXV from the *Jahrbüch. f. w. Botanik* showing the excellent drawings of the fungus by Pringsheim. The description at the bottom of the figure describes the plate in detail. The granular protoplasm of the hyphæ is well shown, and the nodes or constrictions are also seen at fairly regular intervals. The round, clear nuclei are usually placed near these constrictions, and the drawing also shows the true dichotomous branching of the mycelium. The spores singly, or in swarms, are clearly depicted, and the beginning of new hyphæ can be seen originating from the single spores. A few of these spores also show cilia, and Pringsheim described active motility of these spores. Figure 3 shows a photograph of the gross specimen as it appears when taken from the stream. The shaggy, coarse appearance of the threads resembles a bushy mass of hair. The specimen when fresh had a most penetrating, offensive odor, and this is still present after having remained about a year in formaldehyd solution.

Figure 4 is a photomicrograph of the fungus under the low power. A long central stem is seen from which smaller branches grow. These again branch into many terminal filaments. Figure 5 is a photomicrograph of a stained specimen. The fungus was simply dried on a slide and stained by hematoxylin and it shows dichotomous branchings of the end branches, and also contains large clear areas without any granular protoplasm. Figure 6 shows the many branching end filaments when photographed from a fresh specimen. Some of these end hyphæ are said to separate from the rest by transverse fission, and form sporangia. The spores form in these sporangia, and later free themselves and become spore-swarms. Figure 7 shows two groups of three spores each. They are rather oval in shape, and contain coarsely granular protoplasm. Figure 8 shows individual hyphæ under the high power. Granular protoplasm alternates with clear areas, and the clear nucleus of one of the hyphæ appears adjacent to one of the constrictions.

From what has gone before we have concluded that the fungus corresponds in its properties with that described as *Leptomitus lacteus* by Pringsheim.

Clinical Notes

A NEW METHOD OF TAKING *X*-RAY PICTURES

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The object of this paper is to demonstrate what I believe to be an entirely new method of taking *x*-ray pictures, the result of this process being to overcome the density. In this new method, as the illustrations show, two tubes or even three are used in the apparatus at the same time, one tube being placed above the subject in the usual manner, while the other tube or tubes, which we will call auxiliaries, are placed at a different angle. An attachment is placed at the side of the subject, which for want of a better name I call a "cut off" or secondary diaphragm, which is placed one-half way or less, on one or both sides of the trunk or head, either posteriorly or anteroposteriorly, and the tube or tubes are so placed that the anode is exactly centered in the middle of the diaphragm, so that when the side tube or tubes are excited they will penetrate or throw rays laterally. Thus the auxiliary tube or tubes strike the subject midway of the trunk or head, by which means that portion is penetrated by the auxiliary tubes and offers less resistance to the tube placed above in the usual manner, the latter penetrating the part nearest the sensitized plate.

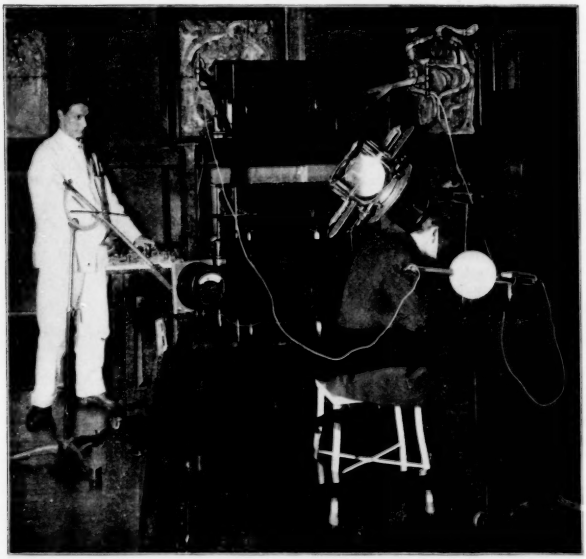

Fig. 1.—A new apparatus for reducing density, showing the working parts: the tube above takes the picture while the rays from the tube on the side passing through the subject in an oblique manner, allow the rays from the upper tube to pass more readily, thus giving greater intensity. An antero-posterior skiagraph of the head is being taken.

It is better to use a compression diaphragm or other apparatus, and especially a tube box that will condense the rays of all the tubes, so that the so-called S rays are cut off.

In this method a good many disappointments will accrue in the preliminary trials. It will be necessary to use two exciting apparatus, as I find it impossible to excite two tubes satisfactorily with

one coil in series or in parallel; therefore it will be better to use two coils of equal spark gap and connected in series with one multiple pointed interrupter. Again, it will depend on the density of the subject as to whether the principal or picture-taking tube or the auxiliary tubes shall be of the same or different vacuum. In a person of gross adipose tissue I use the auxiliary tube of very high vacuum, the top tube medium. For head work, two tubes of medium vacuum will give the best results. But no rule or hard and fast law can be laid down. When once the radiologist has mastered this method of using two or three tubes on the same subject the results and the beauty of his negatives will more than compensate him for additional expense and labor, for the soft tissue skiagraph is of the greatest value, bone work taking a very secondary place.

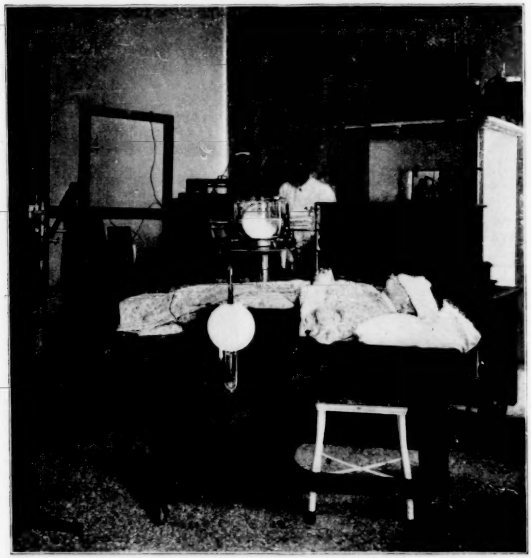

Fig. 2.—Method of taking a trunk skiagraph in posterior position, the second tube being placed at the side of the patient, thus reducing the density of the abdomen or pelvic region.

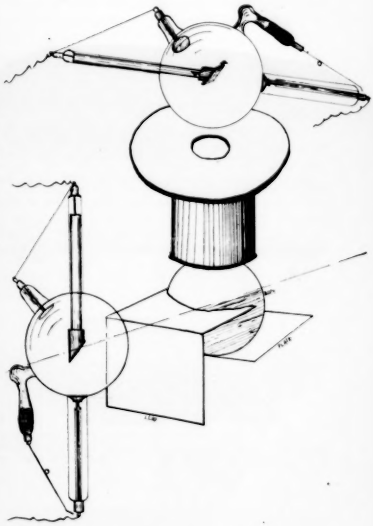

Fig. 3.—Arrangement of tubes, body and plate in improved skiagraphic method.

Fig. 4.—Skiagram of skull taken by new method. Note that left side of the face appears prominently while shadows from right side are exceedingly faint and hardly discernible.

Fig. 5.—Skiagram of renal calculi taken in three seconds by new method.

PROCTOCLYSIS IN THE TREATMENT OF PERITONITIS

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CHICAGO

The employment of proctoclysis in the treatment of the various forms of peritonitis, postoperative or otherwise, and general toxemic conditions, is a very simple procedure, but unless given with appreciation of the principles involved the solution will not be retained by the patient. The continuous method is by far the most scientific and successful. The retention of fluid in the colon depends entirely on its method of administration. Moderate distention is the normal condition of the large intestine. Its mucosa absorbs water with great rapidity. If it is hyperdistended it causes spasm and expulsion of material. The results obtained by this treatment have been so surprising that it was at first feared they were accidental, but they are now so uniform as to amount almost to a mathematical certainty when the details are carried out, which are based on our knowledge of the physiologic and pathologic conditions of septic absorption, local and constitutional immunity, and the elimination of toxins.

The apparatus in its simplest form consists of a fountain syringe or can with a large rubber tube attached, terminating in a vaginal hard rubber or glass tip flexed at an obtuse angle two inches from its tip, having numerous openings in its bulbed end, or in the apparatus made by W. H. Grady & Co., shown in Figure 9. The tip should be inserted into the rectum so that the angle fits closely to the sphincter, and the tube may then be bound firmly to the thigh with adhesive strips so that it may not be expelled, as shown in the illustra-

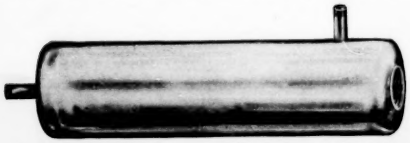


Fig. 1.—(One-third size.) Represents a metal heating chamber, block tin lined, with opening for electric heating unit and rubber tube connections for intake and outlet of saline solution.

Fig. 2.—(One-third size.) Electric heating unit with socket connection and ten feet of cord. This unit can be used with either alternating or direct current 105 to 128 volts. See Fig. 7.

Fig. 3.—(One-third size.) Heat unit for alcohol or Bunsen burner flame with regulating piston. For use where electric current is not available. See Fig. 8.

Fig. 4.—(One-half size of largest rectal tips.) Self retaining rectal tips on catheter showing how adjustment can be accomplished by merely drawing catheter through to desired length.

Fig. 5. — (One-half size.) Pinch cock used entirely to close flow or for drop method.

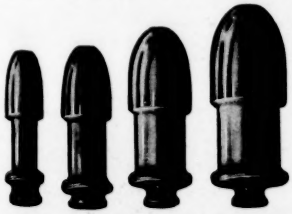


Fig. 6.—(One-third size.) Self-retaining rectal tips made in four sizes of hard rubber with opening through center to admit a soft rubber rectal catheter American size, No. 15. See Fig. 4.

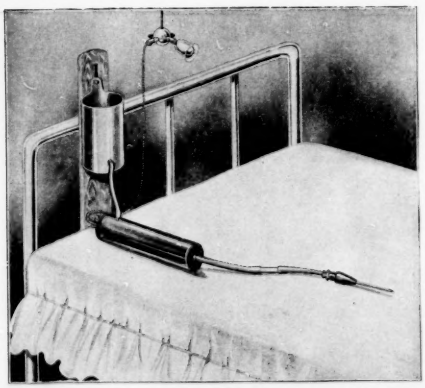


Fig. 7.—Electric heater in operation showing it properly connected. A short glass tube connects catheter to rubber tubing.

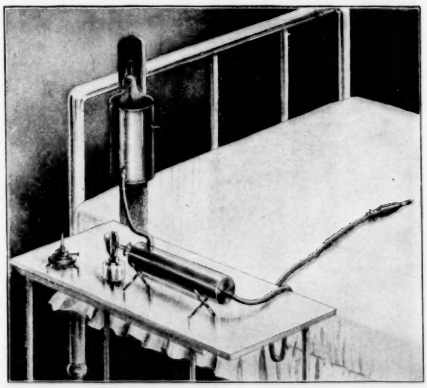


Fig. 8.—Alcohol or gas heater in operation, showing it properly connected. A short glass tube connects catheter to rubber tubing.

tion in Kelly and Noble's "Gynecology and Abdominal Surgery," volume II, page 415. The bag or can is suspended from the foot of the bed so that its base is six inches above the level of the patient's buttocks. Once the irrigating apparatus is thus placed, it need not be disturbed for several days, unless to increase or diminish the speed of influx. The solution, consisting of a dram each of sodium chlorid and calcium chlorid to the pint of water, is now placed in the reservoir and kept at a temperature of 100 F. by applied heat in the form of hot-water bags, thermolytes or an incasing can of hot water, or by means of the apparatus described further on. The quantity administered depends on the severity of the case, the age of the patient and other considerations that will suggest themselves in the particular instance. The average, however, is eighteen pints in twenty-four hours; that is, a pint and a half every two hours. A quantity less than eight pints is, I believe, of little value. In a child of 11 as much as thirty pints have been administered in twenty-four hours without escape of fluid. The control of the flow should never be governed by knots in the tube, forceps clamped thereon, or small openings in the tip. The larger tube with many openings is used to provide for a sudden return of the flow into the can when the patient strains, wishes to expel fluid or void gas. If there be constrictions in the tube the fluid can not return into the can, but passes into the bed linen.

A more elaborate form of apparatus is that devised by Dr. O. H. Elbrecht, of St. Louis, and manufactured by the Meier Dental Manufacturing Company of that city, and illustrated herein. Dr. Elbrecht describes his apparatus as follows:

The proctoclysis heating apparatus illustrated was designed to meet a demand for an outfit that would heat saline and maintain it at a uniform temperature for proctoclysis. Many varieties of heating devices have been employed, but all are found wanting in that they fail to maintain a uniform temperature when heat is applied to the saline reservoir, for the saline is ever changing in amount as a result of absorption, and thus brings about ever changing temperatures. Then also there is a great loss of heat in the rubber tubing from the reservoir to the rectum. With most of the apparatus now in use the saline is cold by the time it enters the rectum. This makes the rectum irritable and less tolerant, and thus retards absorption; while if the saline is warm when discharged into the rectum it insures the greatest possible absorption and least discomfort.

The rectal tips shown in Figure 6 are made in four sizes, are self-retaining and admit a rectal tube through their lumen, as shown in Figure 4 (largest size used here for sake of plain illustration), and thus the saline can be discharged several inches into the rectum. They prevent leakage and the larger sizes are used for patients with relaxed sphincters, as in advanced peritonitis, shock, severe toxemias, etc.

Figure 5 shows a screw clamp which is placed on the rubber tubing behind glass tube connection to catheter, which permits easy disconnection for use of bed-pan and allows the rest of the apparatus to remain intact. It may be applied to any part of the tubing without disturbing the apparatus while in use, and is left wide open when the gravity method is used.

The electric heating arrangement is the cleanest and the most satisfactory, and it requires little or no attention when once started and can be placed in the bed with the patient. The same results can be obtained, however, by using a Bunsen burner or alcohol lamp in connection with the heating chamber, which is then placed on a small table alongside of the bed. (Fig. 8.) This permits the outfit to be used where electricity is not available, as in rural districts or in homes where only gas is at hand. All the parts, including saline tablets, are assembled in a box, which makes the apparatus portable and ready for immediate use in emergencies.

Dr. Elbrecht's apparatus works admirably in adults. It can be used with the angled vaginal douche tip as illustrated in my article just as well as with the bulb tip that is inserted into the rectum, and I would say it works better than the bulb, as the latter occasionally produces irritation and the patient insists on having it removed. For the maintenance of uniform heat the Elbrecht apparatus fulfills all the indications. It does not, however, allow the fluid to flow back when the patient strains. The holder of the Elbrecht apparatus may be inserted into the ordinary fountain syringe can containing hot water, and that keeps it at a uniform temperature and moderately warm for a long period of time.

The proctoclysis is usually continued for three days; rarely as long as five or six. It is best administered in the Fowler position. The best plan is to place a pint and a half of the saline solution in the container every two hours. The container should be elevated sufficiently to allow this all to flow into the rectum in forty to sixty minutes, giving the rectum a period of rest from the influx of fresh fluid for approximately an hour before it flows again.

It is surprising what a large quantity of fluid is taken up by the rectum and how little irritation and disturbance it produces, even in days of continuous use. If the patient is getting too much solution, after the third or fourth day he will show a slight edema of the ankles, hands and even of the face. Then it should be discontinued until his circulatory equilibrium is restored, when the treatment may be repeated if indicated.

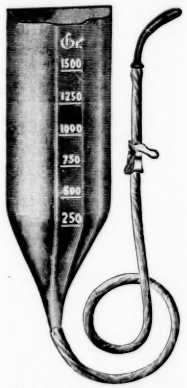


Fig. 9.—Proctoclysis apparatus consisting of fountain syringe, large rubber tube and vaginal hard rubber or glass tip.

In the toxemias of typhoid, scarlatina, and in the early days of pneumonia, before the heart has suffered from the intoxication, it appears to afford great relief. In the later stages of pneumonia it should be used with great caution.

I have been surprised in visiting hospitals to have my attention called to the proctoclysis treatment, in cases in which the patients were given six or eight ounces of fluid every two or three hours, or in which the fountain syringe was placed four to six feet above the level of the bed and the entire hydrostatic pressure thrown on the rectum, and the flow limited by forceps or other combination attached to the tube. In many of these hospitals the superintendent of nurses, the doctors and the nurses themselves complained of the fact that the patients did not retain the fluid. This was undoubtedly true, but the failure to retain it was because it was not properly administered. It should never have a headway of more than fifteen inches hydrostatic pressure, and it gives the best and most uniform results at four to seven inches.

The illustrations show the angle at which the hard rubber tube should be flexed to prevent its pressure

against the posterior wall of the rectum when the patient is placed in the Fowler position. A straight hard-rubber tube often causes considerable irritation, while the flexed tube causes no inconvenience. The rubber tube should always be strapped to the thigh. This insures its retention and prevents traction or pressure on the sphincter. Frequent change of the tube annoys the patient greatly and soon produces an irritability.

100 State Street.

CONTINUOUS ENTEROCLYSIS

THE TWO-FUNNEL VISIBLE-DROP METHOD

SAMUEL E. NEWMAN, M.D.
ST. LOUIS

There have been many attempts to simplify the method of giving a continuous saline solution into the rectum, i. e., the Murphy treatment. Too much seems to depend on the close attention and frequent adjustment by the attendant. In many hospitals the original gravity plan, which is advisable as the simplest and most efficient method, has been discarded; "we can not make it work" being the usual excuse. All the substitutes that I have seen have been poor ones and unreliable makeshifts open to strong objections.

The simple device which is here offered meets every requirement necessary for the successful working of the method and possesses decided advantages.

1. The apparatus is elevated on the table at the side of the bed and need not be disturbed.
2. It is an open method, and any difficulty is easily located.
3. The drops may be fed as fast or as slow as desirable, by means of an adjustment.
4. The drops are visible.
5. The rubber tube is not compressed and distention of the bowel is avoided; any return flow from the rectum is facilitated.

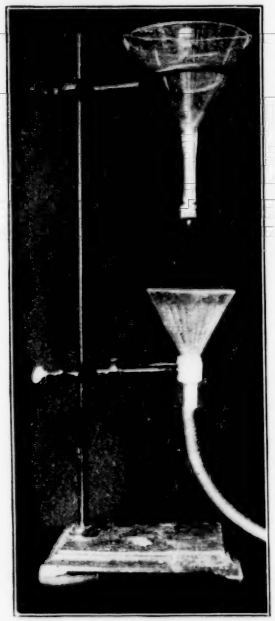


Fig. 1.—A laboratory stand with one large and one small iron ring; two glass funnels, the upper one large and the lower one small. A rubber tube attached to the lower funnel conveys the fluid to the rectum. The upper funnel is provided with a loosely fitting rubber plug at the tip and with a broad metal strip which is fastened across the top of the funnel. This metal strip has an opening at the middle and at this point the nut of a screw is soldered in place. This screw raises or lowers the rubber stopper by means of a wire or thin rod which connects the two.

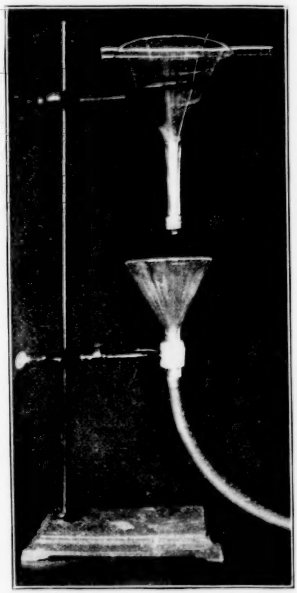


Fig. 2.—This is a home-made apparatus which can be easily devised. The upper funnel is provided with a rubber plug (the plunger of an antitoxin syringe has been used) to which a non-corroding wire is attached by means of a small shot. Another small shot is fastened on the other end of the wire, and this is held in the groove of a small piece of wooden board. Pushing the board toward the center of the funnel lengthens the wire and loosens the rubber plug while pulling the little board from the center of the funnel shortens the wire and tightens the rubber stopper. An incandescent light in the lower funnel will help to keep the saline solution from cooling.

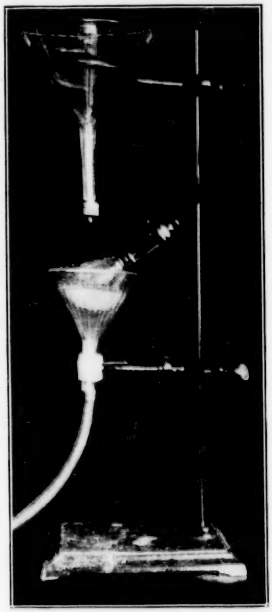


Fig. 3.—A porcelain evaporating-dish is placed in the lower funnel, and an electric bulb rests in this little cup. The upper funnel contains cool saline solution. As the water falls from the funnel above to the funnel below it strikes the electric bulb, flows down its sides and collects in the evaporating dish. It is warmed and gradually displaced by the additional solution which drops from above. The water does not become too warm unless the drops are made to fall at very long intervals. The heat must be turned off when the upper funnel is empty or the flow from it has been checked.

6. Return flow from the rectum is seen and the drops may be fed slower or stopped entirely until the rectum has recovered itself.

I have attempted to solve the problem of maintain-

ing the solution at a lukewarm temperature. In the majority of cases the water which the patient receives is cool or entirely too hot.

The apparatus shown in Figure 2 is arranged for hot saline solution, and in Figure 3, a warm solution should be used in the upper funnel.

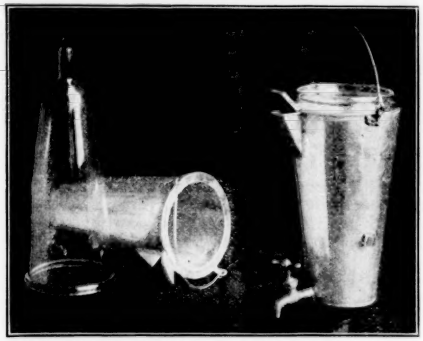
4900 Berlin Avenue.

AN APPARATUS TO KEEP ENTEROCLYSIS SOLUTIONS HOT

B. B. WECHSLER, M.D.
Obstetrician to Montefiore Hospital
PITTSBURG, PA.

This illustration shows an apparatus devised to keep at a proper temperature the solution for enteroclysis given by the Murphy drop method. This is difficult to accomplish by the usual method.

The apparatus consists of a glass irrigator encased in a jacket or nest made of copper for the outer wall and tin for the inner wall, having a space of half an inch between the outer and inner walls. An opening at the top fitted with an air-tight lid permits the filling



On the left, the glass irrigator and the jacket; on the right, the apparatus ready to use.

of the jacket with hot water, and a stop-cock at the base permits its removal when cold. The jacket is supplied with a handle for its support.

The irrigator protrudes about an inch at the base of the jacket, where the connection can be made. The apparatus is covered with a sterile towel when ready to be used.

Tests at the Montefiore Hospital of Pittsburg, Pa., showed the apparatus to work satisfactorily in every respect. The solution is put into the irrigator at a temperature of 130 F. and hot water used as the heating medium. After three and one-half hours the solution is still at about 110 F.

1401 Fifth Avenue.

Chorea Minor.—Forssner leans to the generally accepted opinion that the symptom-complex of chorea minor may be caused by various infections and possibly also other noxious influences. The results of his observations speak in favor of the tendency of the disease to attack especially individuals of feeble constitution. Many of those who in childhood suffered from chorea minor later acquire numerous chronic diseases.—*Hygica Festband.*

DISLOCATION OF THE KNEE AND DISLOCATION OF THE FOOT

WALTER D. WISE, M.D.
BALTIMORE

A case of anterior dislocation of the knee and a case of backward subastragaloid dislocation of the foot with fracture of the astragalus were both seen at the Baltimore City Hospital in the service of Dr. A. C. Harrison, and are reported because of the rarity of the conditions.

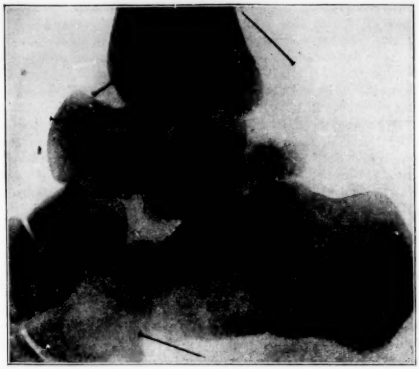


Fig. 1.—Dislocation of the astragaloscaphoid joint and fracture of the posterior part of the astragalus.

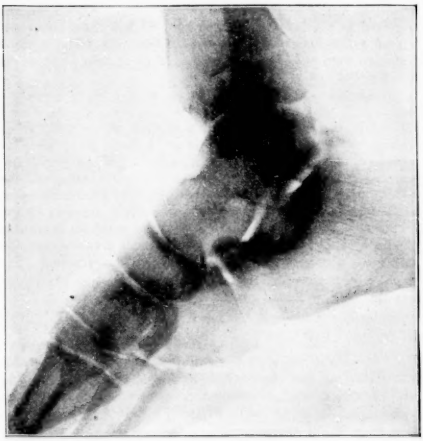


Fig. 2.—Dislocation reduced.

Dislocations of the knee compose less than 2 per cent. of all dislocations. Of these about one-half are of the forward variety, and 20 per cent. of this type are compound. Up to this time there have been reported 270 cases of knee dislocations including all varieties, 113 of these being of the anterior type, this making the one hundred and fourteenth case to be reported.

Subastragaloid dislocations are even much more rare than dislocations of the knee, there being in the literature 86 cases. Of these 50 have been inward, 21 outward, 8 anterior and 7 posterior, this making the eighth case of posterior subastragaloid dislocation of the foot to be reported.

CASE 1.—*History.*—The patient, William W., aged 47, was sent to the hospital July 31 by Dr. K. While the patient was unharnessing a horse in a stable in the country, the animal had become frightened and had run out of the door. In his attempt to catch it, the patient stepped in a ditch, sliding down an incline, throwing his body forward, hyperextending his right leg so that his right foot was turned up on his left thigh. The leg was straightened out and a side splint put on and the patient sent to the hospital. The leg was said to be fractured, and the deformity made the diagnosis appear to be a plausible one without an examination, so the patient was anesthetized.

Examination.—The limb was extended and the lateral axis about normal, but the leg was on a plane anterior to the thigh, and the lower extremity of the femur could be plainly felt in the popliteal space. The quadriceps extensor was lax, the patella was freely movable and seemed to fall back into a large space.

Treatment and Result.—The diagnosis of an anterior dislocation of the knee could readily be made, and the reduction was easily brought about by extension and direct pressure on the femur and tibia, pushing the former forward and the latter downward and backward. A plaster cast from the upper part of the thigh to the foot was applied and allowed to remain on until September 10, a period of six weeks. The cast was then removed, a tight bandage applied, and gradual use of the leg begun. On October 4 the patient was discharged walking normally. A radiograph taken after the dislocation was reduced showed no fracture and the leg in normal position.

CASE 2.—*History.*—The patient, W. P. B., aged 33, was a brakeman on the Baltimore and Ohio railroad. This man was admitted to the hospital August 29. He had fallen from the top of a freight-car, striking on his feet. He felt the right foot give way, and was unable on account of pain to stand on it after that time.

Examination.—The foot was much swollen, very tender to the touch. The front part of the foot was shortened and showed in the midtarsal region a marked prominence, which was recognized as the head of the astragalus. An *x*-ray photograph (Fig. 1), showed a dislocation of the astragaloscaphoid joint with the head of the astragalus riding on the upper surface of the scaphoid, and a fracture of the posterior part of the astragalus, probably the external tubercle of the posterior surface to which is attached the posterior fasciculus of the external lateral ligament. Through the neck of the astragalus there was noted an incomplete seam fracture.

Treatment and Result.—Under anesthesia the dislocation was reduced without material difficulty by making direct pressure on the head of the astragalus, and at the same time drawing the anterior part of the foot strongly forward. The foot and leg were then encased in a snugly fitting plaster cast. A second *x*-ray photograph (Fig. 2) showed the dislocation reduced, and the fracture in satisfactory position. The patient was discharged October 4 with a very satisfactory result.

31 East North Avenue.

The Treatment of Soft Chancre and Its Glandular Complications with Copper Salts.—Almkvist believes that the amidoacetate and lactate of copper have proved themselves more effective in soft chancre and its glandular complications than any other method which can be used in the ambulatory treatment of patients. The copper salts mentioned differ from the copper salts previously tried in this treatment by the fact that they do not precipitate proteins.

EXPERIMENTAL LUNG ANTHRACOSIS

PRELIMINARY NOTE

LEWIS SAYRE MACE, M.D.
SAN FRANCISCO

The intestinal origin of lung anthracosis was suggested in 1862 by Villaret,[1] but denied in 1885 by Arnold,[2] who asserted that the small amount of absorption which he had observed following the feeding of charcoal emulsions was not sufficient evidence on which to accept this theory.

In December, 1905, appeared the first of a series of articles by Van Steenburg and Grysez[3] of Calmette's laboratory, in which they showed that particles of carbon when injected into the stomach or peritoneal cavity of adult animals were promptly absorbed by the lymph ducts of the mesentery and diaphragm, carried through the thorax to the veins returning to the right heart and finally deposited in the lungs. It was noted that with young animals this result was not obtained.

Following the work of Calmette, Van Steenburg, Grysez, Sommerville[4] and others, Petit[5] reported the results of his experiments with six children dying of tuberculosis and other diseases. To these he administered charcoal through a stomach tube and found on autopsy a more or less general anthracosis in the four who suffered from tuberculosis. He concluded that the presence of tuberculous infection rendered the subject especially liable to intestinally borne anthracosis.

On the contrary, Beitzke,[6] Cohn[7] and Schultz[8] repeated the experiments of Calmette and his associates without confirming their results. They found that foreign matter injected into the stomach or peritoneal cavity was, in fact, taken up by the lymphatics, but that it was deposited almost entirely in the liver and spleen. Occasionally, it is true, they observed a pulmonary deposit, but this they attributed to the presence of a spontaneous anthracosis, which occurs in at least 10 per cent. of adult laboratory animals. To this fact or to accidental inhalation during feeding experiments they attributed the results of the French observers.

These contradictory results mean that this subject, so important in considering the origin of tuberculosis and other infections, is still an open one. I have therefore tried to devise methods which should eliminate the errors of former experimenters.

Work with charcoal or any black substance was soon discontinued, as it was found, as Beitzke and others had asserted, that a number of control animals showed the presence of a spontaneous black or gray deposit.

What was needed was a substance, not black, which should be easily recognizable on account of its contrasting color, non-toxic and not affected by the body fluids.

Ultramarine blue, one of the most stable of the blue, green or violet coloring matters, seemed to fulfill these requirements. It is chemically a very inert substance and is affected only by the strongest reagents. No substance resembling it could possibly be present as a spontaneous deposit, and its color is easily recognized on autopsy, which is not true of the red or yellow pigments.

1. Villaret: Cas rare d'anthracose suivi de quelques, considerations physiologiques et pathologiques, Paris, 1862.
2. Arnold: Nebersuchung über Staub-Inhalation und Staub-Metastase, Leipsic, 1885.
3. Van Steenburg and Grysez: Ann d l'Inst. Pasteur, xix, 786.
4. Van Steenburg and Sommerville: Presse méd., xiv, No. 64.
5. Petit: Presse méd., xiv, No. 82.
6. Beitzke: Source of Anthracosis of the Lungs, Virchow's Arch. f. Path. Anat., clxxxvii, No. 1.
7. Cohn: Ber. klin. Wchnschr, xliii, No. 45.
8. Schultz: München. med. Wchnschr., liii, No. 35.

This substance was mixed with milk and, after sterilizing, 5 c.c. of the suspension were injected into the peritoneal cavity of guinea-pigs and the animals killed from five hours to twenty-one days later.

On account of the frequent presence of a spontaneous deposit of insoluble matter in the lungs of animals and the uncertainty which on that account might follow a microscopic examination of the tissues, a deposit sufficient for macroscopic recognition was deemed necessary for a definite conclusion.

I shall not in this preliminary notice give all the details of these experiments. The results do not differ materially from those obtained by Beitzke, except that the deposit, the color of which precluded confusion with a natural anthracosis, did not appear to extend beyond the lymph glands.

The blue matter was regularly taken up by the lymphatics of the mesentery and of the diaphragm. The network of glands surrounding the spleen and the liver was heavily loaded, although none could be observed on section of these organs. The diaphragm was within a few hours colored blue and the lymph ducts of the anterior and posterior mediastinum, as well as the glands lying beneath the sternum, were colored blue and could be traced to the root of the neck.

The bronchial glands were in some cases stained blue and in others not. The lungs often showed a peculiar mottled appearance, but this could not be identified as due to the ultramarine blue.

The staining of the bronchial glands may perhaps indicate that the substance has been reabsorbed from the lungs, especially as the larger lymph vessels of the thorax were shown to be conveying the substance to the veins returning to the right heart, but it may also indicate merely that on account of abnormalities in the lymph ducts a closer relationship between the anterior and posterior ducts and the bronchial glands existed in these particular animals.

It was remarkable that, considering the large amount of ultramarine injected, so little could be recognized after it had left the abdomen. It regularly disappeared until finally, except for a few stained bronchial glands and a blue deposit coloring the diaphragm, none could be found.

This may be due to the relatively large dilution of the solid matter by the body fluids or to its rapid elimination or to chemical alteration of the substance after prolonged contact with the body fluids.

I have therefore decided to repeat the experiments, using a stable substance which can not possibly form the basis of a natural anthracosis and which can be easily separated unchanged and recognized.

Talc seems ideal for this purpose. Unchanged by high temperatures and extremely stable chemically, its separation from the organs becomes a matter of merely following out a certain technic and its recognition is simple and absolute.

By injecting weighed amounts of talc into the peritoneal cavity or alimentary canal and later separating the substance from the various organs and excreta by combustion, treatment with acids, etc., the amount of the deposit occurring in the lungs and other organs, as well as the amount eliminated, can be definitely settled. The result of these experiments will form the basis of a later paper.

240 Stockton Street.

A CASE OF OVARIAN PREGNANCY

N. S. MACDONALD, M.D.
HANCOCK, MICH.

The following condition is reported mainly on account of its comparative rarity and to substantiate further the claim made by many authorities that in certain cases of ectopic pregnancy rupturing into the free abdominal cavity the patient may recover if left alone.

History.—On March 27, 1908, was called to see a primipara, who presented the usual characteristic symptoms of ruptured extrauterine pregnancy. She had missed one period. A hot saline enema was given and the patient was removed to St. Joseph's hospital.

Operation.—Four hours later, her condition having improved somewhat, the abdomen was opened under ether anesthesia and found filled with clotted blood, but nowhere were there signs of active hemorrhage. On passing the hand into the cul-de-sac and along both tubes, the only unusual thing noted was that the right ovary seemed to be somewhat enlarged, of soft consistency and collapsible. On bringing the ovary into the wound it was found to be cup-shaped, of about three times normal size and hollowed out from above to the degree that only a thin layer of ovarian tissue remained to form the wall. The cavity within the ovary contained a small clot, after the removal of which slight oozing was noticeable. The ovary was removed on principle, the clots washed out and the abdominal cavity filled with hot saline solution previous to closure.

Result.—The patient made a good recovery and left the hospital within three weeks.

A SUGGESTION FOR MORE READILY DETERMINING INJURIES OF THE URETER DURING OPERATION

HENRY DAWSON FURNISS, M.D.
NEW YORK

Having within the past year been called on to use the cystoscope on three patients with injured ureters, it occurred to me that the following method might be of assistance in detecting these injuries at the time of operation. The surest method is to pass bougies or catheters into the ureters, but many times this is impracticable, both on account of conditions presented by the patient, and lack of experience on the part of the operator. Often the ureter may be cut, the cut portion inspected, and then there be doubt as to its identity. It is very easy to give a patient methylene blue by mouth before operation, or to inject into the gluteal muscles at the time of operation 20 minims of a 0.4 per cent. aqueous solution of indigo-carmine. These drugs will so color the urine that, should the ureter be cut and there be any leakage from it, the colored solution would be promptly recognized. If the ureter were cut on the distal side of a clamp or ligature, there might be enough discoloration so that it could then be recognized. It is fully realized that many injuries may occur to the ureter in which this procedure would be of no account, but it is so simple, and would at times be of such help, that I think it should be used often.

393 West End Avenue.

Macular and Perimacular Hemianopic Scotoma Following Knife Wound of the Occipital Lobe.—Henschen reports, in *Hygiea Festband*, a case of limited traumatic lesion of the occipital lobe causing a macular scotoma. He holds that the case proves that the macula has a distinct and limited center in the occipital lobe, which center he would designate as a cortical retina.

THREE CASES OF EXTRAUTERINE PREGNANCY

R. R. HUGGINS, M.D.
PITTSBURG, PA.

When a married woman, whose menstrual period has been regular for some time previous, misses or goes beyond her time for menstruation she will suspect pregnancy. If a flow from the vagina begins in a period varying from four or five days to three weeks after the regular time, continuing more or less regularly, accompanied by pains periodic in character located in the hypogastrium, or on either side, extrauterine pregnancy should at once be suspected by the physician, unless some other well-defined condition is present to account for it. This vaginal hemorrhage at times may be dark-colored, coagulated blood, at others a blood-tinged leucorrhea; in some instances it may be bright red. If it is profuse in quantity it is more likely to be bright red in color. It is usually described by the patient as being different from the normal menstrual flow and is, therefore, atypical.

There may be a number of severe attacks of pain lasting over a period of several weeks before the final rupture occurs. Not infrequently considerable blood escapes into the abdomen during these attacks, but not enough to produce serious symptoms. There are undoubtedly many instances in which the ovum escapes into the abdominal cavity with but moderate hemorrhage, becomes destroyed, and the woman recovers.

If in addition to these signs bimanual examination reveals an enlarged tender tube on either side of the uterus, extrauterine pregnancy should at once be suspected. This history and these symptoms are present in the majority of cases long before the final stage of rupture and collapse.

Recently three patients have been operated on whose histories show the symptoms referred to in a striking manner. In two of these women there had been considerable hemorrhage previous to the diagnosis. In Case 2 rupture of the tube had occurred. In Case 3 a large amount of blood had escaped from the fimbriated end of the tube. The ovum was attached within one inch of the uterus, and there was imminent danger of rupture at that point. In all three cases the history shows that menstruation had been regular for some months previous to the onset of symptoms.

The following symptoms and the signs elicited by careful bimanual examination are doubtless present in most cases of extrauterine pregnancy, and when present they are danger signals of the utmost importance: Period due on a certain date does not appear. Six, eleven and thirteen days later a flow from the vagina begins which continues irregularly and is accompanied by attacks of pain recurring at frequent intervals, at times being very severe and accompanied by symptoms of shock.

It is interesting to note the absence of any of the ordinary symptoms of pregnancy in these patients, as nausea, vomiting, or marked local signs, viz.: softening of the cervix and distinct enlargement of the uterus. That these signs seldom stand forth prominently in the picture of an ectopic gestation is my experience.

CASE 1.—Referred by Dr. Nealon.

Patient.—Mrs. C., aged 29, no labors, no miscarriages. Family history negative. She had had the usual diseases of childhood.

History.—The general previous history contains little of importance. She was married ten years ago. Menstruation began at the age of 14, and has been always regular, though she had suffered pain previous to and during flow for the last ten years.

Regular period was due Dec. 25, 1908. It did not occur, but on January 1 a flow began which was accompanied by severe pain. This flow continued at irregular intervals and was atypical in character, sometimes very scant and again rather free until her admission to hospital, Jan. 26, 1909. During this time, there had been several attacks of severe pain. On one occasion she was found by her physician in a condition of shock. The pains have been irregular and much more severe than those due to miscarriage during the first four or six weeks. On pelvic examination a mass was found on the right side of the uterus, and the uterus was pushed toward the left. Any movement of the uterus caused great pain. There was no elevation of temperature.

Diagnosis.—Extra Uterine Pregnancy.

Operation.—Jan. 26, 1909: Incision revealed some free blood in the abdominal cavity and a considerable quantity of clots in the pelvis. The right tube which was distended with blood to one inch in diameter was removed. The ovum was located about one inch from the uterus and there was imminent danger of rupture at this point as there was an opening less in size than a pin point which was plugged by a small fragment of decidual tissue. Recovery.

CASE 2.—Referred by Dr. Clark.

Patient.—Mrs. C., aged 29; no labors, no miscarriages. Family history negative.

History.—Menstruation began at the age of 14 and has always been regular. She has been married seven years. Owing to her anxiety to bear children Dr. Clark introduced a stem pessary some months ago and this was worn until the development of symptoms incident to the present illness. The menstrual period was due January 2. It did not appear on this date, but on January 13, a flow began from the uterus accompanied by severe pains, much worse than had been customary at any time in her history. This flow continued somewhat irregularly until the morning of January 23. During this time there was more or less pain, which at times was severe. The patient described the pain as cramp-like and intermittant in character. On the morning of January 23 she was seized with a very severe pain which was accompanied by prostration. Dr. Clark was then called for the first time and it was necessary to administer morphin in order to control the pain. Later in the day I saw and examined the woman. From the history, condition and appearance of the patient the diagnosis of extrauterine pregnancy was made. The abdomen was everywhere tender and the presence of fluid in the pelvis was easily determined. Operation revealed a tube ruptured at junction of outer and middle third. Recovery.

CASE 3.—Referred by Dr. Dankrim.

Patient.—Mrs. H., aged 33, was admitted to the hospital Feb. 19, 1909. Family history negative. She had had the usual diseases of childhood.

History.—General health was good previous to marriage, eighteen months ago. She gave birth to a dead child nine months after marriage. Since this time she states that there has been pain at the menstrual period. The flow lasted from four to five days and always recurred at regular intervals—every twenty-eight days. January 25 was the expected and regular time. The flow did not appear on this date, but on February 7, thirteen days later, it appeared and was accompanied by more than the usual amount of pain. This flow did not seem normal to the patient and was described by her as more sticky in consistency than normal. Also at times was somewhat brighter in color. In short it was an atypical discharge and continued from February 7 until admission to the hospital February 19. During the last thirteen days there were several severe attacks of pain which she described as colic-like seizures. After the pain there would sometimes be an increase in the vaginal discharge. On February 18, the day before admission, an attack of pain occurred which was very

severe and referred to the epigastric region and was accompanied by symptoms of shock and prostration. The family physician thinking her symptoms serious, sent her to the hospital.

Examination.—On admission the patient showed very pronounced symptoms of loss of blood; pale mucous membranes and pulse of about 120. The abdomen was moderately distended and very tender over the entire surface. Peristalsis was markedly decreased and there was slight tendency to rigidity of muscles. These are, I believe, almost pathognomic signs of hemorrhage into the peritoneal cavity. The examination revealed an enlarged tube on the right side and bulging of the cul-de-sac from the presence of the fluid.

Operation.—The condition of the patient was such that she could safely withstand a short operation. This was done February 19, at 4 p. m. The abdomen contained a large quantity of fluid blood and the pelvis was filled with numerous clots. The right tube was removed, the pelvis cleared of clots, and the abdomen closed. The tube was distended with blood to ¾ inch in diameter throughout its length. The location of the ovum was almost one inch from the uterus and the decidua was well attached to the upper surface of the tube. The hemorrhage had escaped from the fimbriated end of the tube, and there were at least three pints of blood in the peritoneal cavity. Doubtless there would have been later a more serious hemorrhage had operation not occurred at this time. Recovery.

Fifth and Liberty Avenues.

KIDNEY CONDITIONS SIMULATING RENAL CALCULI

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The admonition of the elder Gross, "never operate for stone unless you have one in your pocket," seems especially applicable to renal calculi. The reason for this failure lies not only in the inability of the surgeon to find the stone when present (although this, I grant, at times occurs to the most experienced), but also because there are a number of pathologic conditions whose symptoms simulate stone in the kidney most accurately. Some of these I wish to present for consideration as exemplified by several typical cases:

The first case is one of infected infarcts of the kidney, with symptoms simulating renal calculus.

CASE 1.—*History.*—J. N. S., aged 47, thin and spare, by occupation a cattle speculator, had had for ten days previous to operation constant pain referred to the region of the loin and right kidney. The pain was so severe that morphin had no effect, although he was given large amounts. The twenty-four hours preceding operation it was necessary to give him chloroform every hour or two to relieve his pain. His temperature was normal and so was his pulse. The pain was never referred to the right shoulder but at times to the left testicle. An examination of the urine showed pus and red blood corpuscles in small amounts, with a few hyaline and one granular cast. A diagnosis of stone in the kidney was made.

Operation.—Nov. 10, 1907, at 11 p. m., at St. Luke's Hospital, Dr. Guffey and Dr. Trexler assisting. Ether was given and an oblique incision was made through the loin about five inches long. With some difficulty, owing to the position of the ribs, the kidney was delivered. Its capsule was stripped and the kidney opened through the cortex. It was deeply congested and probably one-third larger than normal. At three or four places on the cortex there appeared small irregular areas from size of a small pea to that of a nickel, that gave the kidney a yellowish mottled appearance. When cut into, they appeared to be spots of infection or infarcts. An examination of the gall bladder and appendix revealed nothing abnormal. The kidney was replaced in position, the wound packed with iodoform gauze to control the hemorrhage, and a rubber drainage tube inserted into the pelvis of the kidney.

Postoperative History.—The patient reacted well from the operation, his pulse never going above 90 and his temperature 101. He left the hospital at the end of two weeks with the wound completely healed, except at the point of the drainage. On Sept. 1, 1908, the patient was seen again. He never had had a return of symptoms and had gained thirty pounds in weight. "Never so well."

Infection from the blood has been until recently thought to be an extremely rare occurrence, but the recent investigations of Cabot and Farrar C. Cobb in Boston, and the experimental work of Buxton and Torrey of Cornell, and Brewer of New York and others show unquestionably that such an infection is by no means unusual. It has been demonstrated, however, that some predisposing localizing cause must also be present before infection of the kidney will result. This *locus minoris resistentiæ* was produced by Brewer by bruising the kidney substance or ligating the ureter. In every subject so dealt with experimentally, bacteria introduced into the circulation produced septic nephritis. In my own case trauma doubtless was the localizing agent, as the patient's occupation—that of a cattle buyer—subjected him to frequent bumps or contusions, although he did not remember being severely injured just prior to the attack.

The extreme pain in this case and the lack of elevation of temperature, however, would lead me to believe that the infectious element was subordinate to the embolic process. There was no valvular disease of the heart, however, and consequently it is more reasonable to assume that the emboli were of bacterial origin. Unfortunately, no culture was made at the time of operation.

The second case is more frankly that of a hematogenous infection of the kidney.

CASE 2.—*Patient.*—Miss L., school teacher, aged 32, had been troubled with pain in the region of the left kidney, and symptoms of cystitis for the past five months.

Examination.—At the hospital, Sept. 15, 1908. The patient was a young woman, greatly emaciated, with a dry brown tongue, rapid and feeble pulse (112 to 120), temperature from 99 to 102.2. At this time she complained, chiefly, of frequent burning urination and severe pain in the lower part of the abdomen, which was constant but increased on voiding urine. Careful inquiry revealed the fact that the bladder symptoms had developed secondarily to those referred to the kidney. The first symptoms of which she herself was conscious were those of severe pain in the region of the back. This was a sharp, stabbing pain, radiating down into the groin and the labia. There was constantly a dull pain in the loin, and marked tenderness on pressure. A cystoscopic examination of the bladder showed marked cystitis, with so inflamed a condition of the mucosa that it was impossible to catheterize the ureters. An examination of the urine showed quantities of pus, some blood and many epithelial cells. A few hyaline and granular casts were present, and Dr. Trimble was able to isolate the colon bacillus and staphylococcus. A blood count showed a moderate leucocytosis. The symptoms pointed to primary infection of the kidney with secondary involvement of the bladder, but a positive demonstration of this fact was impossible.

Operation.—Owing to the increased pain and tenderness in the region of the left kidney, it was determined to operate on this side first, as clinically it seemed the organ most diseased. On September 15 the patient was anesthetized and an incision made through the loin. The kidney, which was considerably enlarged, was delivered and incised down through the cortex, exposing completely the renal pelvis. Nothing pathologic was found further than a greatly congested, swollen kidney whose cortex seemed much thickened. Owing to the pressure clamp that was applied at the hilus, the organ was so congested and

black from the stasis of the blood that, had there been minute infarcts or infectious emboli, it is extremely questionable whether they could have been demonstrated; at any rate no such pathologic condition could be positively shown. A drain was inserted into the kidney and retained in place by three plain catgut sutures, the organ replaced and the perirenal pouch drained.

Postoperative History.—The patient reacted nicely from the operation, and the wound healed kindly, although there was only partial subsidence of her symptoms. Although the bladder condition was treated most actively, yet it only grew worse; in fact, the patient did not tolerate at all any injections or irrigations of any sort. The application to the bladder of any of the silver preparations seemed only to aggravate the condition. After a period of two weeks her temperature rose and her pulse increased in frequency and became very weak. She soon developed uremic symptoms and died about three weeks after the operation.

In this case it is a question whether nephrotomy of the other kidney would have relieved the patient. In my opinion it would not, for I believe that she was generally septic, and that the right kidney was no more involved than the liver or bone-marrow. The fact that the bladder was so intolerant to the silver salts is suggestive, in my experience, of tuberculosis of the bladder. Dr Trimble, however, found only colon bacillus and the staphylococcus from the bladder, and also found the same organisms in the cultures he made from the body of the kidney at the time of the operation. Primarily, the history of the case points to an infection of the kidney, but the symptoms were those of a kidney stone.

The third condition I wish to discuss is that of an ascending pyonephrosis with infection of the kidney substance and cortex. It is exemplified in that of the following case:

CASE 3.—*History.*—C. P. C., a physician, aged 56, for some years had passed gravel and had suffered at these times with pain in the region of both the right and left kidney. He had an old cystitis. Recently he was seized with sudden, severe pain in the region of the left kidney, and after forty-eight hours passed a small gravel, attended with pus and blood in the urine. He improved slightly, but on the fifth day had a sudden chill, the temperature rising to 103; the pain in region of the left loin was severe and constant. The pulse was rapid and weak, 98 to 115. There was a cold perspiration and a slightly urinous odor to the breath. On the following morning the temperature was again above 103. A consultation was held with Dr. Taylor and Dr. Binnie and an operation advised. The *x*-ray gave a shadow in the region of the left kidney which was thought to be a stone.

Operation.—On the following morning, June 14, 1907, at Agnew Hospital, the left kidney was exposed through a long incision in the loin. Manipulation was difficult on account of the extreme amount of fat, the patient's failure to take an anesthetic properly and his extremely pendulous abdomen. On the kidney being incised a rather profuse hemorrhage was encountered and several ounces of fetid blood, pus and urine mixed together was evacuated. The odor of this was very offensive. A large dressed-drainage-tube was fastened into the pelvis of the kidney; the wound was properly closed, and the perirenal pouch also drained.

Postoperative History.—Recovery was slow but uneventful. The patient was seen Sept. 10, 1907, when the wound had completely healed; he had recovered his normal weight and expressed himself as being in the best of health.

The concluding case in this series which I wish to report was one seen in conjunction with Dr. John Outland.

CASE 4.—*History.*—G. E. M., a strong, robust farmer, Salina, Kansas, had had within the past year two atttacks of sharp, severe, sudden pain in the region of the left kidney, radiating into the loin and left testicle. These attacks came on suddenly at intervals of more than a month, and were so severe that they required large doses of morphin to relieve him. He had never passed any gravel, nor was there any appreciable change in the character of the urine. After each of these attacks the patient complained of a persistent soreness and tenderness on pressure in the left kidney region. Twenty-four hours after the last attack he came to the hospital. At that time his temperature was about 100, his pulse 90, respiration 20. There was pain in the region of the left kidney, and considerable rigidity of the left rectus muscle. He required several hypodermic injections of morphin before it subsided. An *x*-ray picture was taken, which apparently showed a small stone that was evident on both the negatives taken. The effort of going to the doctor's office started another attack of this renal colic, and the patient was given a hypodermic injection before he was able to return to the hospital.

Operation.—Owing to the fatness of the man, it was necessary to make rather a large incision. The kidney was freed and partially delivered through the incision. It was opened its entire length but no stone was found. There was, however, a small roughened, apparently calcareous area about the size of a buckshot at the apex of one of the pyramids. This was scraped away with the finger. It could not, however, be said to be a renal stone, but was made up of fibrous connective tissue. A close examination of this fragment convinces me that it was one of the "fibrous calculi" recently reported by Gage and Beal.[1] The kidney and perirenal pouch were also drained in this case. There has been no return of the symptoms.

This last case, like the others, was attended with very great pain, although the "calculus," if it could be called such, was not of such a nature as to lacerate the kidney or obstruct the ureter. If we can accept the opinion of Rainey, it was a stone in the process of formation before the fibrin or colloid of kidney necrosis had become infiltrated completely with urinary salts. But why in this case and the others detailed should pain have been so prominent a symptom? It is easy to conceive of a hard rough calculus becoming loosened and mechanically lacerating and obstructing the ureter. The latter condition might result, theoretically at least, from a "soft calculus" or obstruction from blood clot or pus, but in the cases here reported this explanation does not seem sufficient. In a hematogenous infection the process starts in the cortex and there is no chance for mechanical obstruction. Possibly infection beneath the capsule, with the inflammatory process thus confined, would explain the very great pain in these cases. Or is there an unknown chemical change—the result of a reaction between the urine and toxins produced by renal disease that accounts for it? The advocates of the chemical theory of disease have long suggested this; and until more information is at hand it seems worthy of consideration. Surely our findings at operation, and after autopsy, do not always satisfactorily explain these painful symptoms. We are beginning to discover that not all pain in the kidney is due to renal calculus or tuberculosis. This latter condition I have excluded from my discussion. Doubtless other pathologic conditions of the kidney also simulate renal stone.

Appendicitis, gallstones, gastric and duodenal ulcer have come in for their share of surgical attention, when a renal calculus only was at fault. But the four conditions mentioned, renal infarcts, hematogenous infection, ascending pyonephritis and "fibrous calculus," exemplified by the cases reported, are veritable kidney conditions that demand early and radical operation. Fortunately they respond just as surely to operation as does kidney stone.

603 Bryant Building.

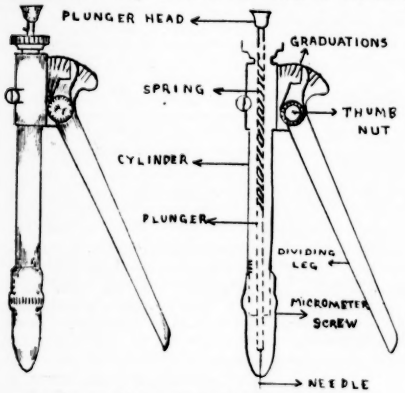
1. Ann. Surg., September, 1908.

A NEW PRECISION ESTHESIOMETER *

ALFRED GORDON, M.D.
PHILADELPHIA

I have frequently observed that the usual test for sensations in organic or functional nervous diseases is not very reliable. Sometimes the results obtained by one man are diametrically opposite to those obtained by another man, and not infrequently it happens that the results obtained at one examination are different from those obtained at another. The reason appeared to me to lie in the degree of pressure exercised by each examiner while applying the end of a needle or esthesiometer to the patient's skin. For example, in examining two symmetrical limbs for touch and pain, it is difficult to retain in memory the exact amount of pressure produced on the skin of one limb while the needle is carried to the other limb. A slight or marked difference may happen, and inferences are drawn as to a loss or diminished sensation, and consequently errors of diagnosis are easily made.

Particularly when a necessity arises in a very delicate discrimination of pain sense, the needle or the sharp



Perspective and sectional views of the esthesiometer.

end of the ordinary esthesiometer can not serve its purpose.

It occurred to me that when the sharp end of the needle could be applied to the skin always with the same degree of pressure the results would be uniform. With this end in view I devised the instrument here described.

One leg of an ordinary esthesiometer is represented by a cylinder in which is placed a spring reaching about half-way of the cylinder. The spring is continued by a solid body (plunger), to the lower end of which a needle is attached. A micrometer screw surrounds the lower part of the plunger with the needle. By pressure on the plunger head the needle is lowered and protrudes from the cylinder. When the latter is done, the micrometer screw is placed by rotatory movements at the desired distance so that only a certain length of the needle projects. The exact position of the micrometer is then indicated by division lines immediately above. In this manner, no matter how much pressure is brought on the plunger head, the same amount of needle will protrude and the same amount of pressure will be produced with the latter on the skin.

The instrument is light in weight, small and convenient for carrying in the vest pocket.

* Instrument exhibited before the Philadelphia Neurological Society, January, 1909.

A STRANGE CASE OF NASAL OBSTRUCTION

F. L. ROGERS, M.D.
LONG BEACH, CALIF.

On June 22, 1908, a patient was referred to me for diagnosis and treatment.

History.—Girl, aged 9, of American birth and Italian parentage. Her general mental and physical development and family history were good. She had had the usual diseases of childhood, including diphtheria at the age of 4, for which antitoxin was successfully used. A year later she was examined by a specialist on diseases of the nose and throat in New York City, and was successfully operated on for adenoids. The parents were then informed that there were other troubles, the nature of which they did not understand, which might be corrected when the child was older. From early infancy she had had a mucous discharge from the nose, which after the adenoidectomy, continued from the right side only.

Examination.—External examination revealed the right nostril blocked with thick, ropy mucous over the discharge of which she had no control, but there was no evidence of pus or other inflammatory waste products. On irrigation of the nasal cavity no fluids passed into the pharynx on the right side and air inflation was equally unsuccessful in forcing an opening to the pharynx. The left side was normal. By digital post-nasal examination a smooth, well-developed, bony wall of the consistency of and continuous with the nasal septum attached to the posterior border of the inner margin of the palate bone was found. This extended across and was united to the descending wing of the sphenoid on a plane with it and the posterior margin of the vomer, thus forming a firm wall perfectly closing that side of the nose. The secretion from all the accessory sinuses developed at her age, including maxillary, ethmoid and sphenoid, had their openings in front of this anomalous partition. The nostril was otherwise normally developed and as the condition was considered congenital rather than acquired, we advised operation to restore the organ to normal function and to relieve the distressing nasal discharges.

Operation.—This was accomplished, through the nose, by the aid of a long handled nasal drill, a small, straight stiff-bladed nasal saw, and a Freer, angular bone-cutting nasal forceps. Using the left forefinger in the posterior nares as a guide, and with the assistance of the anesthetist and my regular office assistant, the operation was accomplished in twenty minutes. Ether was the anesthetic used. The greatest care was exercised to leave no rough bony projections or ragged surfaces about the margins of the opening made and that every particle of the false partition wall was removed. Two sections of soft rubber catheter, one above the other, were introduced into the nose, freely perforated for drainage along their entire length and extending well into the pharynx. To these were attached two heavy braided silk ligatures connecting each end of the tubes through the mouth. Over the bridge of the nose and well onto the cheeks was applied a ¾-inch strip of adhesive plaster to a buttonhole slit in which the projecting ends of the drainage tubes were anchored by ligature for further security.

After-Treatment.—Alkaline nasal irrigations, principally weak normal salt and Dobell's solutions were used daily for three weeks when the tubes were loose and the wound in the nose healed.

Result.—The result is all that could be desired, as no difference in the caliber of the two sides can now be detected and all the former unpleasant symptoms are abated.

The case seemed sufficiently rare in the literature at my command to justify this report.

New and Nonofficial Remedies

SINCE THE PUBLICATION OF THE BOOK "NEW AND NONOFFCIAL REMEDIES, 1909," THE FOLLOWING ARTICLES HAVE BEEN ACCEPTED BY THE COUNCIL ON PHARMACY AND CHEMISTRY OF THE AMERICAN MEDICAL ASSOCIATION. THEIR ACCEPTANCE HAS BEEN BASED LARGELY ON EVIDENCE SUPPLIED BY THE MANUFACTURER OR HIS AGENT AND IN PART ON INVESTIGATION MADE BY OR UNDER THE DIRECTION OF THE COUNCIL. CRITICISMS AND CORRECTIONS TO AID IN THE REVISION OF THE MATTER BEFORE PUBLICATION IN THE BOOK ARE ASKED FOR.

THE COUNCIL DESIRES PHYSICIANS TO UNDERSTAND THAT THE ACCEPTANCE OF AN ARTICLE DOES NOT NECESSARILY MEAN A RECOMMENDATION, BUT THAT SO FAR AS KNOWN IT COMPLIES WITH THE RULES ADOPTED BY THE COUNCIL.

W. A. PUCKNER, SECRETARY.

DIETHYL-BARBITURIC ACID AND COMPOUNDS

DIETHYL-BARBITURIC ACID.—Acidum diæthyl-barbituricum.—Diethyl malonyl urea. Malo-urea. Diethyl-barbituric acid, $CO\begin{matrix}/NH\text{-}CO\backslash\\\backslash NH\text{-}CO/\end{matrix}\begin{matrix}/C_2H_5\\\backslash C_2H_5\end{matrix}$ $= C_8H_{12}O_3N_2$, is 2, 4, 6-trioxy-5-diethyl pyrimidin, a ureide derived from diethylmalonic acid, $COOH.C(C_2H_5)_2COOH$, and urea, $CO(NH_2)_2$.

It may be prepared by the interaction of esters of diethylmalonic acid with urea in the presence of metallic alcoholates. (U. S. patent No. 782,739.) It is also obtained by condensation of diethyl-cyanacetic ester with urea by means of sodium alcoholate.

It is a white, crystalline powder, melting at about 188° C. (370.4° F.), odorless and faintly bitter. It is soluble in about 150 parts of cold water, and in about 12 parts of boiling water. It is quite soluble in ether, acetone and ethyl acetate; also slightly soluble in chloroform, petroleum benzin, acetic acid and amyl alcohol. It forms salts with alkalies which are soluble in water.

Prolonged heating with sodium carbonate solution liberates ammonia. Denninges' reagent produces a white precipitate; Millon's reagent produces in solution acidulated with nitric acid a precipitate soluble in an excess of the reagent.

Actions and Uses.—Diethyl-barbituric acid is quickly absorbed, especially when it is given in solution. In small doses it induces sleep apparently without any other effect. In larger doses the temperature falls and animals show marked trembling and restlessness in their sleep. In small doses it is a relatively safe hypnotic, but fatalities have followed its indiscriminate use.

It is used in simple insomnia, as well as in that accompanying hysteria, neurasthenia and mental disturbances.

Dosage.—0.3 to 1 Gm. (5 to 15 grains) in hot water, tea or milk, or, if in wafers or capsules, followed by a cupful of some warm liquid.

Proprietary Preparation:

VERONAL.—Veronalum.—A name applied to diethyl-barbituric acid.

Manufactured by Farbenfabriken, vorm. Friedr. Bayer & Co., Elberfeld, Germany, and E. Merck, Darmstadt. (Farbenfabriken of Elberfeld Co., New York, and Merck & Co., New York.) U. S. patent No. 782,739. U. S. trademark.

Veronal Tablets, 5 Grains.—Each tablet contains veronal 0.33 gm. (5 grains).

SODIUM DIETHYL-BARBITURATE.—Sodii diæthyl-barbituras.—Sodium diethylbarbiturate, Na $(C_8H_{11}O_3N_2)$ is the mono-sodium salt of diethyl-barbituric acid.

Sodium diethyl-barbiturate occurs as a white, crystalline powder, soluble in 5 parts of water at 15° C. and in about 2 parts of boiling water. The aqueous solution of the salt has a bitter alkaline taste.

The salt contains 11.18 per cent. sodium (Na) and should yield about 89 per cent. (theory requires 89.31 per cent.) diethyl-barbituric acid (JOURNAL, Jan. 23, 1909, vol. 52, p. 311).

Action and Uses.—The same as diethyl-barbituric acid, but claimed to act more rapidly on account of its greater solubility. Because of its solubility, administration by rectal injection and also subcutaneous injection has been proposed.

Dosage.—The same as diethyl-barbituric acid, which see. It should be administered in aqueous solution.

Proprietary Preparations:

MEDINAL.—A name applied to Sodium diethyl-barbiturate.

Manufactured by Chemische Fabrik auf Actien vorm E. Schering, Berlin, Germany (Schering & Glatz, New York). U. S. patent No. 780,241, 879,499. U. S. trademark applied for.

Medinal Tablets, 5 Grains.—Each tablet contains medinal 0.33 gm. (5 grains).

VERONAL-SODIUM.—A name applied to sodium diethyl barbiturate.

Manufactured by Farbenfabriken, vorm. Friedr. Bayer & Co., Elberfeld, Germany (Farbenfabriken of Elberfeld Co., New York.) U. S. patent and trademark. (See Veronal.)

BROVALOL. — Brovalol, $CH_2.CH(CH_3).CHBr.COO(C_{10}H_{17})$ $= C_{15}H_{25}O_2Br$ is the brom-isovaleric-acid ester of borneol. It contains 25.2 per cent. bromine.

Brovalol is obtained by esterification of borneol with bromisovaleric acid or its derivatives.

Brovalol is a colorless, oily liquid, having a slight aromatic odor. Under 10 mm. pressure it boils at 163° C. (325.4° F.). It is insoluble in water but soluble in alcohol, chloroform and ether.

Action and Uses.—Brovalol acts as an analeptic, antispastic and nervine. It is claimed to be well tolerated even in large doses and to possess greater sedative power than similar valeric acid derivatives, due to its bromine content.

Dosage.—0.25 to 0.75 Gm. (4 to 12 grains) several times a day. It is supplied only in capsules (pearls), each containing 0.25 Gm. (4 grains).

Manufactured by Chemische Fabrik auf Aktien (vorm. E. Scherin), Berlin, Germany (Schering & Glatz, New York). U. S. patent and U. S. trademark applied for.

ZINC PERMANGANATE.—Zinci Permanganas.—Zinc Permanganate, Zn $(Mno_4)_2 + 6H_2O$ is the zinc salt of permanganic acid. It should contain not less than 90 per cent. of zinc permanganate.

Zinc permanganate occurs in dark brown, nearly black, lustrous, deliquescent crystals, or crystalline masses. It is readily soluble in water (1 in 3), generally leaving a slight residue. Aqueous solutions decompose in air, but are permanent if kept in well-closed bottles, protected from light. When heated slowly it loses water of crystallization (25.46 per cent.) and oxygen, leaving a residue of zinc manganite. If heated quickly it gives off pink vapors, or, more properly, a fine dust of manganese trioxid. Zinc permanganate gives up oxygen more easily than does the potassium salt, hence great care should be taken in bringing it in contact with easily oxidizable substances.

Zinc permanganate should be almost completely soluble in water. The color of the solution is discharged by alcohol, hydrogen sulphid, ferrous sulphate, oxalic acid, or hydrogen dioxid, especially if the solution is first rendered acid with sulphuric acid.

Tests.—If 1 gm. of the salt is dissolved in 50 Cc. of water and 5 Cc. of alcohol added, a colorless solution must be obtained after boiling and filtering; if a small part of the latter acidified with nitric acid is tested with silver nitrate T. S. for chlorid and with barium chlorid T. S. for sulphate, not more than traces of either should be indicated.

To estimate the purity, 0.1 to 0.2 gm. of substance is weighed, dissolved in water, filtered through asbestos, the filtrate acidulated with 5 Cc. dilute sulphuric acid, warmed to about 60° C., treated with an excess of tenth-normal oxalic acid V. S., and the excess of oxalic acid determined by titration with N/10 potassium permanganate V. S. Each cubic centimenter of tenth-normal oxalic acid V. S. consumed indicates, 0.0040842 gm. zinc permanganate, $Zn(MnO_4)_2 + 6H_2O = 408.42$.

Action and Uses.—Zinc permanganate resembles the potassium salt in its oxidizing properties, but is more astringent. It is antiseptic. It is used chiefly in urethritis, either as an injection or as a urethral douche.

Dosage.—Locally 1 part to 4,000 (1 grain in 8 fluidounces). 1.3 gm. zinc permanganate is equal in permanganate content to 1 gm. potassium permanganate.

Non-Proprietary Preparations:

Zinc Permanganate, P.W.R.—Manufactured by the Powers-Weightman-Rosengarten Co., Philadelphia, Pa.

Zinc Permanganate, Merck.—Manufactured by E. Merck, Darmstadt, Germany (Merck & Co., New York).

Tablets Zinc Permanganate, 1 grain, Mulford.—Prepared by the H. K. Mulford Co., Philadelphia, Pa.

PHARMACEUTICAL PREPARATIONS ACCEPTED FOR N. N. R.

The following dosage forms of accepted proprietary articles have also been accepted for N. N. R.:

Agurin Tablets, 5 grains.
Acet-Theocin-Sodium Tablets, 4 grains.
Iodothyrin Tablets, 5 grains.
Novaspirin Tablets, 5 grains.
Veronal Tablets, 15 grains.
Piperazin Tablets, 16 grains.
Citarin Tablets, 15 grains.
Hedonal Tablets, 8 grains.
Sajodin Tablets, 8 grains.

ARTICLES ACCEPTED FOR N. N. R. APPENDIX.

Burroughs Wellcome & Co., London and New York.

*Tabloid Coffee Mint B W & Co.**—Each tablet is said to contain: Sodium bicarbonate, 0.2 Gm. (3 grains); ammonium carbonate, 0.004 Gm. (1/16 grain); extract of coffee (obtained by extracting roasted coffee with water; the percolate is evaporated, dried and powdered), 0.032 Gm. (½ grain); cereum oxalate, 0.016 Gm. (¼ grain); oil of peppermint to flavor.

The Maltine Company, Brooklyn, N. Y.

Maltine.—A preparation essentially equivalent to Extractum Malti U. S. P. and containing 3.88 per cent. alcohol.
U. S. trademark No. 44,556.

V 19

Therapeutics

RESPIRATORY EDUCATION

Under the above title Dr. J. Madison Taylor, Philadelphia, in the *Dietetic and Hygienic Gazette*, February, 1909, urges a more careful consideration by the profession of the respiratory ability of patients who come for treatment.

It seems demonstrated that respiratory ability can be increased by exercise as surely as any part of the body can be muscularly developed, and Taylor believes that the chest never can attain its normal capacity unless encouraged. The crying of infants and young children is probably a physiologic necessity, and certainly tends to increase the respiratory ability. Older children, if well and so situated as to have the normal amount of outdoor exercise, undoubtedly play sufficiently hard to breathe properly. Still, it is of constant occurrence that the physician sees children of all ages, and especially in their early teens, who have an insufficient lung capacity. The shoulders droop, the anterior upper chest is more or less depressed, and the whole vitality of such children is far below normal.

Certainly the physician has not fulfilled his mission if he does not carefully examine every little patient who comes under his care to ascertain if the respiratory ability, in his opinion, is normal, and if not normal, to find the cause and remove it if possible. Such causes may be adenoids, improper clothing, improper ventilation in the bedroom, insufficient outdoor exercise, improper method of standing, walking, sitting and studying, and even the need of glasses for near work, as defective eyesight may cause a child to assume awkward positions in reading and studying, and, of course, the cause may be actual lesions of the lungs or heart.

It is not necessary to describe all the immediate and future disturbances, lesions and degenerations that may occur from improper and insufficient breathing, and when Taylor states that no part of the body can be properly developed or be in proper health with imperfect respiration, he states a truth. Fortunately, children up to the age of puberty can generally soon correct, by proper physical exercise, most of these respiratory disabilities, provided that serious spinal curvatures have not taken place and that no organic disease is present. And here it may be stated that spinal curvatures would be less frequently in evidence if children were taught to breathe properly.

In most cities there are admirable gymnasiums to which children with defective muscle ability and who have defective lung capacity can be sent to be properly developed under both medical and gymnastic supervision. However, not all children have the opportunity or the financial ability to take such special courses as are advisable, and the mothers should be told what is needed in the way of exercise, and the children should be taught how to perform the exercises needed to increase the chest capacity and the respiratory ability. Some of these exercises are described by Taylor in his article.

Mothers frequently make this serious error in dressing their growing girls. They either cause or permit too much constriction about the upper part of the chest. This is especially true of the early substitutes for corsets, the first corsets, and even some of the simple underwaists. Many and many a time one finds these so tight over the upper chest and over the developing breasts as to prevent normal growth and to obstruct proper inspiration. Such treatment of the growing girl is absolutely inexcusable.

It is only the orthopedic surgeon and the physicians who make many insurance examinations who realize that the majority of adults do not know how to respire properly. It sometimes takes several minutes to instruct an apparently normal, well, and even intelligent individual how to take his deepest breath and show, even incompletely, his respiratory capacity. Also, many and many an individual can not be taught, even at several sittings, how to fill his lungs properly, and it is a constant source of wonder that such persons can go through life breathing so insufficiently.

Although these individuals may live for years, most of them never look well, and they rarely act well. Most of their functions are imperfect, although perhaps sufficient for a quiet, uneventful life, provided no serious illness attacks them. Moreover, every such individual has his prospect of longevity impaired and his expectancy of life diminished, while the man, woman or child who properly respires will not have so many colds, will not have so many infections, and is less likely to develop tuberculosis.

Taylor says that in most persons there are areas of lungs never developed, and it is certainly true that after several weeks of respiratory exercise the lung capacity can be greatly increased, and this with almost every individual who has not been taught such exercises. Of course with older individuals, or if there has occurred any damage to any part of the thorax, the improvement in breathing may not be great. But this only emphasizes the necessity of teaching all children how to respire.

It is hardly necessary to state that all breathing under exercise should be done through the nose, as the air is thus warmed before entering the lungs, is rendered freer of dust and germs, and is taken in slowly enough to allow the chest to expand normally.

Taylor quotes the physiologists as recognizing the subdivisions of air in the lungs as : "(a) the tidal, that which enters the lungs during ordinary respiration; (b) the complemental, the air which can be forced in; (c) the reserve, the air that can be expelled during forced expiration; and (d) the residual, air that always remains in the alveoli or air spaces." The vital capacity is defined as the volume of air which can be "forcibly ejected by extreme expiration after a most complete inspiration."

Normal inspiration is shorter than normal expiration, and in teaching a patient to breathe Taylor advises that the inspiration should last three seconds and the expiration five seconds, and this should be gradually increased, second by second, until after some weeks twenty seconds are consumed in inspiration and twenty-eight in expiration, and he would have the full inspiration sustained for from two to ten seconds before exhaling. The number of respirations a minute normally vary from sixteen to twenty-four.

Taylor advises that in the beginning respiratory exercises should be taken while the patient is lying down, so as to start with thoroughly relaxed muscles. Later they should be done while standing, with the patient erect, the head thrown back, and sometimes with the hands clasped behind the back. His exact method can best be obtained from his own description.

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SATURDAY, APRIL 17, 1909

THE RELATION OF IODIN TO THE ACTIVITY OF THYROID PREPARATIONS

Struck by the similarity of the effects of iodin and thyroid in the treatment of goiter, Kocher, in 1895, suggested the desirability of examining the thyroid for iodin, but the tests made in Berne were negative. In the same year, however, Baumann, in Freiburg, discovered the presence of iodin in no inconsiderable amounts in the thyroid of man and other animals, but even now, over thirteen years later, we are still uncertain as to just what part the iodin plays in the physiologic activity and the therapeutic effects of the thyroid. Baumann, and Roos who first studied the action of the iodin-containing constituent of the thyroid, were of the opinion that the iodothyrin was the active principle of the thyroid gland, but there were many who did not accept this view and looked on the iodin as merely an injurious substance which the thyroid had removed from the circulating blood. Others pointed out that not all animals have iodin in their thyroids, yet removal of such iodin-free thyroids has just as serious effects as removal of thyroids that contain iodin, and therefore it would seem that a thyroid can be functionally active even when it contains no iodin.

This question of the relation of iodin to thyroid activity has practical as well as theoretical interest, for, if the therapeutic activity of a thyroid preparation is in direct proportion to the amount of iodin it contains, we have a ready method for standardizing such thyroid preparations for commercial purposes. As the amount of iodin in sheep thyroids varies greatly, depending not only on differences in the breed of sheep, but also on the place in which they have lived, and on the time of year, it is very necessary to know how closely the iodin content and the physiologic activity correspond, so that we may know whether to be content with giving our patients a certain number of grains of desiccated thyroid at a dose, or to demand a dosage varying according to the amount of iodin present in each preparation.

The method of study which has been in common use in determining the effect of thyroid preparations has depended on the fact that thyroid administration causes loss of weight and increased excretion of nitrogen in the urine. By this method, Roos found evidence that thyroid preparations with low iodin content produced less metabolic disturbance than did those more rich in iodin. Similar results obtained by Oswald, von Cyon, and Marine, added weight to the belief in the importance of the iodothyrin for the effects of thyroid feeding, but the methods used did not permit of any direct quantitative estimations.

Recently, Reid Hunt has elaborated a physiologic test for thyroid preparations which seems to permit of rather surprisingly accurate measurement. It is based on the fact that feeding of definite quantities of thyroid substance to mice increases very greatly the resistance of the animals to a certain poison, acetonitril, so that they can withstand many times the ordinarily fatal dose. In view of the fact that thyroid feeding has the opposite effect on rats, lowering their resistance to acetonitril, and that both mice and rats are made less resistant to morphin by thyroid, this test would seem to rest on a most uncertain foundation, and could hardly be expected to give either constant or reliable results. Nevertheless, large experience has convinced Hunt of its accuracy, and, obscure as the explanation of this influence of thyroid on mice may be, the results of its application to a number of important problems seem to be distinctly valuable. A study of the question of the dependence of physiologic activity on the iodin content of thyroid preparations is reported by Hunt and Seidell,[1] the results of which seem to be conclusively in the affirmative. With very few exceptions, the power of thyroid tissue to protect mice against acetonitril, or to render rats and mice more susceptible to morphin, closely parallels the iodin content. Indeed, by ascertaining the physiologic activity by this means it is possible to estimate with considerable accuracy the amount of iodin in a given thyroid preparation.

As thyroid tissue free from iodin, such as occurs in new-born infants and in the adult animals of some species, also possesses a small but distinct physiologic activity, it seems necessary to Hunt and Seidell to assume that the thyroid may possess a substance which is active independently of any iodin combination, but the activity of which is enhanced by the presence of iodin. Furthermore, when the iodin content of an animal's thyroid is increased by feeding iodids or iodoform, the physiologic activity of the gland increases in proportion to the amount of iodin it contains, indicating that the thyroid is able rapidly to convert iodin coming to it in the blood into the active iodin compound characteristic of the functionating thyroid.

PATHOLOGY AND HISTORY

Some interesting side-lights are being thrown on history through the growing recognition of the rôle that disease has played in human events. It is easy to understand that, in the past, imperfect knowledge of the

1. Hygienic Laboratory Bulletin No. 47, United States Public Health and Marine-Hospital Service.

nature and causes of disease has obscured the true significance of many serious affections and has led to mistaken conclusions. It would now be well for the historian, reviewing the events of the past, to make use of the knowledge of pathology that has been acquired in the last half-century. If the modern historian, with the aid of the pathology of to-day, does not succeed in changing the face of history, at least he can set the candle of another theory flickering in the haze of uncertainties that enshroud many a venerable historical mystery, and in some instances, perhaps, light the way to a probable solution. It has been suggested, for instance, that the decadence of Greece, which has been attributed to luxury and the instability of an overweening democracy, was largely influenced, if not directly caused, by the introduction of malaria into the Greek communities, as a consequence of some of the expeditions from Greece into countries where malaria existed.

The version which has come down to us of the climax of many a tragic story of the past might be materially different if contemporary historians had possessed the key to pathology furnished by modern surgery. It might be interesting to speculate, for instance, on how history might have been modified if appendicitis had been as well known in ancient and medieval times as now. Thousands of persons in every large city must have died mysterious and inexplicable deaths from this disorder—deaths probably attributed in most cases to poison. After all, the story of appendicitis, if one has not the key to it, reads very much like that of poison. The symptoms develop suddenly, not long after a meal; there is apt to be intense pain; general peritonitis develops, and the abdominal tenderness indicates some intense irritant within, which, of course, would be thought to be the poison at work.

Among the victims of necessarily unrecognized appendicitis were, no doubt, many celebrated personages of history. Britannicus, the son of Claudius, for instance, who might have become Roman emperor, died rather suddenly under circumstances which suggested poison to the ancient historians, but which might tempt a modern physician to think of some abdominal condition due probably to appendicitis in the first place.

Extrauterine pregnancy, too, must have caused many mysterious deaths. In the same class of causes would be rupture of the stomach due to ulcer. This last may have been the cause of the sudden death of that beautiful Duchess of Orleans, commonly known as Madame, who was the subject of one of Bossuet's great funeral orations. In this case, as in many others, the violence of the symptoms gave rise to the suspicion of poisoning, and popular sympathy for the untimely fate of the victim, combined with popular detestation for her supposed enemies, clinched the diagnosis.

Again, it might light up many dark places in history could we project into the past some of our recently acquired knowledge of mental diseases. It may be that some pathologists and alienists have exaggerated the importance of the rôle that the aberrations of great men have played in history; yet there is no doubt that a sound contemporary knowledge of mental pathology might have furnished the clue to many now insoluble historical riddles.

Such are a few of the interesting hypotheses brought back from the dimmer byways of history, alongside of which stretch so many fruitful fields for conjecture. Those whose work lies in other provinces—physicians, for instance—may find profit and pleasure in a holiday spent in those fascinating, though speculative, fields.

THE NEED OF BETTER PROVISION FOR TREATMENT IN EARLY STAGES OF INSANITY

The attitude of the American public toward preventive medicine, until a rather recent date, might be expressed in a paraphrase of the celebrated remark of Pinckney: "Millions for cure, but not one cent for prevention." While something along preventive lines has been done in recent years, it has been in the way of isolated personal effort, and we do not believe that there has been as yet any widespread appreciation of the necessity for preventive rather than curative medicine, even among the more intelligent of the general public. Physicians, and others who come into contact with the sick, realize that there are at present two classes of patients whose plight is especially distressing, those with advanced tuberculosis, and those with incipient insanity.

It is undoubtedly true that some interest has recently been aroused regarding the problem of the insane or nearly insane. The remarkable work of Beers,[1] "A Mind That Found Itself," has stimulated public thought to some extent, a stimulation which is evidenced by the gift of Mr. Phipps to the Johns Hopkins University of a psychopathic institute. The formation, in Connecticut, of a "Society for Mental Hygiene" is another straw which shows the direction of the current of popular opinion. Still, it must be admitted that as yet there is no widespread public interest in the matter. Undoubtedly there should be, and equally without question every medical center should have its psychopathic hospital either in connection with a general hospital, or, if geographical situation permits of it, as part of one of the regular hospitals for the insane.

As Mosher[2] states, insane patients may be divided into two classes: those who become insane because of congenital defects in the nervous system, and those with relatively normal brains who break down under the stress and competition of modern life. Patients in the latter class frequently recover completely if treated early. The legal system of commitment operative in most states makes no distinction between these two

1. Reviewed in THE JOURNAL A. M. A., April 9, 1908, l, 1526 and 1546.
2. Am. Jour. Insanity, January, 1909.

groups of cases. Usually, on account of the legal red tape and the necessary publicity, the family of the patient puts off committing him until the mental symptoms are very pronounced, or the patient has shown evidence of suicidal or homicidal tendencies, or destructive delusion of some form. Often, under these circumstances, the lockup is the only place available for the temporary detention of the patient during the commitment proceedings. When the patient has reached this stage he has already long passed the incipient period.

Such a state of affairs is aptly compared by Mosher to refusal to treat a patient with pulmonary tuberculosis until cavity formation is apparent. If the methods of commitment are changed so as to allow of treatment in an institution without the usual legal formalities it will mean the establishment of psychopathic wards in connection with many general hospitals. At the same time, the hospitals for the insane should be reorganized, as some already have been. Any one who is at all cognizant of affairs in most of our public institutions for the insane knows that they are overcrowded with patients and undermanned with physicians. The study of the medical aspects of the cases often falls to the lot of the junior officers, or is relegated to second place by the demands of a necessary but vexatious routine, and the care of an excessive number of patients. All this must be changed. There must be special wards for acute cases of a curable type with as many physicians and nurses to the patient as in a general hospital. The results so far accomplished in the few psychopathic clinics in this country amply demonstrate that such a change is needed and is fully warranted.

TYPHOID FEVER AND SEWERAGE SYSTEMS

The connection between typhoid fever and water supply has been frequently pointed out by sanitarians and, we regret to say, illustrated all too frequently by deplorably concrete instances; that between the installation of a sewerage system and the same disease, although not unnoticed, has not received the same attention. It was observed, to be sure, that when the city of Berlin began to dispose of its house drainage by the water-carriage and sewage-farm system a fall occurred in the death rate from typhoid fever and that a like improvement occurred in Munich under similar circumstances, but in those days of animated controversies between the *"Grundwassertheoretiker"* and the *"Trinkwasserfanatiker"* the true explanation of such an occurrence was not easy to reach.

At present we are in a better position to understand the real significance of the beneficial effects which often follow the installation of sewerage systems. In the first place, we have learned that while the life of the typhoid bacillus in water is usually short, its life in contaminated soil and in accumulations of fecal matter, although by no means indefinitely prolonged, may yet extend over several months. In other words, the mere suspension of the typhoid bacillus in water, as happens in any water-carriage system, accelerates its destruction. In the second place, infectious material containing typhoid bacilli, to put it roughly, which is gathered together from scores of houses and hospitals is easier to deal with than if typhoid bacilli are left scattered in widely separated localities in individual outhouses and privy vaults. Instead of several thousand or hundred thousand possible or potential foci of infection there is only the sewage to threaten us, and although the sewage problem itself is by no means a simple one, we at least know where the danger is, where the typhoid bacilli are localized. Finally, and this is perhaps the most illuminating point of all, the share of the house-fly in disseminating disease is now clear to us. The family privy vault furnishes an opportunity for this mode of conveyance which even the most rudimentary sewage irrigation system could not afford in anything like the same degree. It seems likely that the early autumnal incidence of typhoid fever noticed in many localities in the Northern Hemisphere is in large part to be accounted for by the time of seasonal advent of the house-fly.

Such facts certainly enable us to understand the diminution of typhoid fever which is seen to follow the abolition of the privy vault and box closet in such cities as Winnipeg, where recommendations made to the health authorities a few years ago were acted on with such vigor and discrimination that the disease, once a scourge, is now relatively infrequent. They also constitute cogent reasons for hastening the work of sewer construction in many small towns and villages where the open privy still holds sway. Typhoid fever to-day is largely a rural disease and, as we have seen, the reason is not far to seek. The old campaign slogan of European sanitarians, *"tout à l'égout,"* might well be revived in view of such conditions as the casual railway traveler can all too clearly discern in hundreds of small cities and hamlets in this country. Sewerage systems should be installed wherever the density and resources of a community make it possible. Isolated farm buildings even can be provided with a rational system of sewage disposal at relatively small expense. The open privy must go with all its implications, its danger to the family, to the neighbors and to the public milk supply.

ECONOMIC ASPECT OF LENGTHENING HUMAN LIFE

The economic loss from preventable diseases constitutes a powerful argument for the extension of sanitary measures. According to statistics from the report on National Vitality submitted to the Conservation Commission for the information of President Roosevelt, the loss of life from the preventable cases of tuberculosis, diarrhea, enteritis, pneumonia, violence, typhoid fever and diphtheria amounts on the average to 7.3 years. Professor Irving Fisher, as a member of the Conserva-

tion Commission, concludes from a careful investigation of the ratios of preventable deaths from each of ninety principal causes of death in the United States, that over one-third of all deaths which now occur could be prevented. This would amount to a prolongation of the average life for over 15 years. It is difficult to estimate the influence of such a prolongation of life on industry and economic relations in general. There is one branch of business, however, which is vitally concerned in the prolongation of life and to which such decreased mortality would appeal most concretely as a great financial saving, viz., life insurance. In an address to the Association of Life Insurance Presidents[1] Professor Fisher made the proposition that life insurance companies should interest themselves in the extension of human life from financial, if not from philanthropic motives. He believes that the companies could well afford to devote $200,000 a year to the purposes of life preservation, a sum which amounts to only one-eighth of 1 per cent. of present annual death claims. It was suggested by Professor Fisher that this fund be expended through the agency of the Committee of One Hundred on National Health and be used not for the establishment of hospitals or sanatoria, but for the sanitary education of the public and in stimulating municipalities, states and the federal government to greater efforts for the preservation of health. He argued that the money thus expended would, by awakening public interest, result in the expenditure by these governing bodies of much greater sums and in a general emulation in the care of health which would secure very desirable results. The proposition has already been acted on in a favorable way by the appointment of a committee by the Association of Life Insurance Presidents to consider the question. In appointing the committee an effort was made to select men representing the various branches in life insurance work, so that the different problems involved in the proposition, executive, actuarial, legal and medical, could be passed on by experts. It is to be noted that a prominent insurance company advertises a bureau of cooperation and information whose services are placed at the disposal of health officers, committees for the prevention of tuberculosis and social workers and offers the help of its agents for the distribution of pamphlets or other literature on hygiene and allied subjects. The cooperation of the insurance companies will unquestionably prove of great assistance in the campaign for better health conditions. There is little doubt that other industrial and commercial organizations would find it to their advantage to expend money for like purposes, even if the dividends on such an investment were less tangible than mere dollars and cents.

1. American Health Magazine, Supplement, March, 1909.

Infectious Pyelonephritis.—Ekehorn reports 35 cases. The operative treatment for the relief of pyelonephritis due to the colon bacillus is not to be directed against miliary and small abscesses in the kidney as such, but rather against certain mechanical conditions which predispose the kidney to infection and hinder healing of pyelonephritis, such as anchoring of the kidney in a dislocated position, retention in pelvis, obstruction of ureter, etc.—*Hygiea Festband.*

Medical News

ARKANSAS

Elections.—At the annual session of the Tenth Councilor District Medical Society, held in Fort Smith March 16, Dr. Frank B. Young, Springdale, was elected president; Dr. James G. Omelvena, Midland, vice-president; Dr. Dred R. Dorente, Fort Smith, secretary (re-elected); and Dr. Othello M. Bourland, Van Buren, treasurer. Siloam Springs was selected as the next place of meeting.——Mississippi County Medical Society, at its annual meeting March 9, elected Dr. S. A. Lowry, Luxora, president; Dr. Hugh F. Crawford, Jr., Wilson, vice-president; Dr. Oleander Howton, Osceola, secretary; Dr. Thomas F. Hudson, Luxora, treasurer; Dr. Henry C. Dunavant, Osceola, delegate to the state society, and Dr. D. C. Joyner, Joiner, alternate.——Saline County Medical Society, at its annual session, held in Benton, elected the following officers: Dr. J. M. Philips, Benton, president; Dr. James W. Walton, vice-president; Dr. Charles Prickett, Traskwood, secretary, and Drs. Charles J. Steed, Hurricane, and Dewell Gann, Benton, delegates to the state society.——At the annual meeting of Lawrence County Medical Society at Blackrock, Dr. John C. Land, Walnut Ridge, was elected president; Dr. James W. Morris, Denton, vice-president and delegate to the state society; Dr. Horace R. McCarroll, Walnut Ridge, secretary; Dr. John C. Hughes, Walnut Ridge, treasurer, and Dr. Benjamin R. Woodyard, Blackrock, alternate-delegate to the state society.——At the annual meeting of Jefferson County Medical Society, held in Pine Bluff, Dr. Camillus K. Caruthers, Pine Bluff, was elected president; Dr. Charles A. Glover, Pine Bluff, vice-president, and Dr. William T. Lowe, Morrell, secretary.

CALIFORNIA

Coming Meetings.—The Medical Society of the State of California will hold its annual meeting in San Jose, April 20-22.——The annual meeting of the California Public Health Association will be held in the same place, April 19. The sanitary demonstration car of the State Board of Health will be at San Jose, and demonstrations from it will furnish the basis of the work of the association.

Tuberculosis.—An association for the study and prevention of tuberculosis has been organized in Sierra Madre under the direction of Drs. George H. Kress and Titian J. Coffey, Los Angeles, and Fitch C. E. Mattison, Pasadena.——The bill providing for the compulsory registration of all cases of tuberculosis in the state, and for the fumigation of houses in which persons afflicted with the disease have lived, was passed by the legislature, March 15.

Will Not Keep Indigent Tuberculosis Patients.—The Charity Conference Committee of Los Angeles, March 16, sent official requests to kindred organizations that organized charities and physicians should not persist in sending patients in advanced stages of tuberculosis to Los Angeles, only to cause suffering to the indigents and a burden to the communities to which such patients have no ties, and giving warning that they will be obliged promptly to return such indigent patients to the places from which they had been sent.

Personal.—Dr. Walter Lindley, Los Angeles, editor of the *Southern California Practitioner*, and Mrs. Lindley have sailed for Europe.——Dr. Julius Rosenstirn, San Francisco, has gone abroad for a year.——Dr. George W. Dudley, Sacramento, was operated on for appendicitis at the Sisters' Hospital, March 28, and is reported to be doing well.——Dr. Robert V. Day, Los Angeles, has been seriously ill, in the California Hospital, with septicemia, due to an operation wound.——Dr. E. C. Fabre-Rajotte, Lincoln, is said to be convalescent after a severe attack of septicemia due to an operation wound.

Society Meetings.—At the twenty-seventh semi-annual meeting of the San Joaquin Valley Medical Society, held in Fresno, March 9, Dr. Benjamin F. Walker, Stockton, was elected president; Drs. Robert W. Musgrave and R. Edmond Dixon, Hanford, vice-presidents, and Dr. Dwight H. Trowbridge, Fresno, secretary.——At the sixth annual meeting of the Central California Health Officers' Association, which was held in connection with that of the San Joaquin Valley Medical Society, Dr. Robert W. Musgrave, Hanford, was elected president; Dr. Samuel W. Langdon, Jr., Stockton, vice-president; and Dr. George A. Hare, Fresno, secretary-treasurer.

The Law's Decisions.—The suit of Arthur Martin, San Francisco, against Charles Sonntag and others identified officially

with the Ukiah State Hospital for the Insane for $1,127,000 for alleged false imprisonment was decided in favor of the defendants in the United States Circuit Court March 27.——Judge Oster, in the Superior Court at Los Angeles, January 29, decided in favor of Dr. Thomas G. Devitt, Los Angeles, in the suit brought against him for complications said to have been due to vaccination, and for which $5,000 damages were claimed.——Dr. Charles H. Carleton, Los Angeles, is said to have pleaded guilty of having used the mails to further illegal medical practices, and to have been fined $1,500.

Hospital Notes.—The newly constructed Mission Emergency Hospital, San Francisco, was opened April 11, with a full medical and surgical staff, and equipped with all the facilities for treating emergency cases.——I. W. Hellman, San Francisco, has given $100,000 to the Mount Zion Hospital in memory of his wife. This will be used for a new building to be called the Esther Hellman Building. A donation of $5,000 is also reported from Mrs. Clara Glazier and Henry Glazier in memory of the late Simon Glazier.——The Marysville Hospital Company has been incorporated by Drs. Nelson C.Bissell, George B. Worthington, S. B. Swift, and James E. Taylor, with a capital stock of $20,000.——The Mary Jesse Hospital and Training School for Nurses has been incorporated at Santa Rosa by Dr. James W. Jesse, Mary E. Jesse and Marie F. Necker.

Banquet to Dr. Blue.—The Citizens' Health Committee of San Francisco gave a banquet in honor of Dr. Rupert Blue, U. S. P. H. and M.-H. Service, March 31. The text of the evening was "San Francisco Cleansed, California's Fairest Daughter." Charles S. Wheeler acted as toastmaster and addresses were made by Governor Gillette, Mayor Taylor of San Francisco, Dr. Martin Regensburger, president of the California State Board of Health, Dr. Thomas W. Huntington of the San Francisco Board of Health, Dr. Philip Mills Jones, secretary of the Medical Society of the State of California, and others. Mayor Taylor, in behalf of the city, presented a gold watch to Dr. Blue, a handsome desk set to Dr. W. Colby Rucker, assistant to Dr. Blue, and in addition presented medals to all the assistants in the campaign undertaken against the bubonic plague.

FLORIDA

New County Hospital.—Through the efforts of Dr. George E. Welch, Edmund W. Warren, and others, Palatka, the matter of the taking up the fund of $1,832.22 previously accumulated, and investing the sum in a permanent hospital for Putnam county, has been inaugurated. The trustees met and organized with Dr. George E. Welch, chairman; J. H. Haughton, secretary, and W. Ramsaur, treasurer. A site was purchased for $3,150, the building on which has been rearranged, modern plumbing has been installed, and the walls have been made sanitary. The institution will soon be ready to receive patients.

State Medical Association Meeting.—The Florida Medical Association held its thirty-sixth annual meeting in Pensacola, April 7, 8 and 9, Dr. James D. Love, Jacksonville, presiding in the absence of the president, Dr. James F. McKinstry, Jr., Gainesville. Addresses of welcome were delivered by Mayor C. C. Goodman, of Pensacola, and Dr. Warren E. Anderson, Pensacola, president of the Escambia County Medical Society. To these addresses Dr. Love, the presiding officer, and Dr. J. D. Fernandez, Jacksonville, the secretary, responded. Jacksonville was selected as the next place of meeting. The following officers were elected: President, Dr. Henry E. Palmer, Tallahassee; vice-presidents, Drs. Cary P. Rogers, Jacksonville; Urban S. Bird, Tampa; and Horace L. Simpson, Pensacola; secretary, Dr. J. D. Fernandez, Jacksonville, re-elected; librarian, Dr. Charles E. Terry, Jacksonville, re-elected, and councilors, Dr. John McDiarmid, DeLand, and Dr. Ruff. A report of the proceedings will appear in a later issue of THE JOURNAL.

GEORGIA

State Society Meets.—The Medical Association of Georgia will hold its annual meeting in Macon April 20 to 23, under the presidency of Dr. Thomas D. Coleman, Augusta.

Personal.—Dr. William B. Summerall, superintendent of the Atlanta Hospital for Contagious Diseases, has been elected superintendent of the Grady Hospital.——Drs. John C. Olmstead, Michael Hoke and Cyrus W. Strickler have been elected delegates, and Drs. Willis B. Jones, J. Ross Simpson and George M. Niles alternates to the Medical Association of Georgia.

Dispensary Trouble May be Settled.—The dispensary of the Atlanta Antituberculosis Association, located on the top floor of the Gould Building, petition for the removal of which was made by the tenants of the building, has been investigated thoroughly by a special committee of the Fulton County Medical Association, and the protesting tenants have been asked to inspect the dispensary and then to decide whether or not they will withdraw their complaints. The institution is purely charitable, its educational value has been great, and it is believed by physicians to be in no way a menace to the adjacent tenants in the building.

ILLINOIS

Veteran Physician Injured.—Dr. Hartwell C. Howard, Champaign, one of the oldest and most esteemed practitioners of central Illinois, was struck by a speeding automobile, April 1, and seriously injured.

New Medical Society.—It is announced that a new medical organization is to be formed in McDonough county, to promote the general knowledge of surgery and pathology. Drs. Joseph B. Bacon, S. S. Allen and A. P. Standard, Macomb, are the incorporators of the organization, which is to be known as the McDonough Surgical and Pathological Society.

New Psychopathic Hospital.—The public charity service of Illinois signalized the opening of its fourth new psychopathic hospital at Anna, on April 16, when the new hospital building, erected in connection with the Illinois Southern Hospital for the Insane, was formally dedicated. This type of hospital is one of the concrete outgrowths of the campaign for hospital service, as against custodial service in the institutions in the insane group. This campaign was begun two years ago by Governor Deneen on the advice of the State Board of Charities. A $100,000 psychopathic hospital has been opened to service in connection with the Illinois Western Hospital for the Insane, at Watertown, and two new hospitals, one for women and one for men, have been opened in connection with the Illinois General Hospital for the Insane near Peoria. These two hospitals cost $100,000. The results have been a complete demonstration of the efficiency of hospital service, especially among certain types of the acute insane. The appropriation of $25,000 for a similar institution at Elgin was insufficient, and an additional appropriation of $15,000 is asked of the present General Assembly to complete a modern fireproof psychopathic hospital at Elgin. At Kankakee $75,000 was appropriated two years ago for a hospital building, and this building, now nearly completed, will be rushed to completion and furnished, if the legislature passes an emergency bill allowing $20,500 additional. This bill has passed the house and is now before the senate. At Jacksonville psychopathic work soon will be established in a new hospital wing and in an old wing which is being refitted. The hospital at Anna cost $50,000. It is modern in every respect, built not as a monument to an architect, but for the specific purpose for which it is to be used. Included in the equipment is a complete hydrotherapeutic outfit. The service in all these hospitals is conducted along modern lines under the direction of the State Psychopathic Institute at Kankakee. The program for the dedication included "A History of the Anna Hospital," by Dr. William L. Athon, the superintendent; "The Charities of Illinois," by Governor Deneen; "The Law of Commitment," by Judge Monroe C. Crawford, County Judge, Union County; and "The Modern Treatment of the Mentally Ill and Mentally Defective," by Dr. Frank Billings, President of the State Board of Charities. Following this program there was an inspection of the psychopathic hospital and its formal dedication. The superintendents of all the state hospitals for the insane and members of the State Board of Charities were present.

Chicago

Money for Hospital.—By the will of the late Nelson B. Holden, $5,000 is devised to the Presbyterian Hospital and $10,000 to the Presbyterian Hospital Training School for Nurses.

Unlicensed Hospital Proprietor Fined.—Peter Rundberg is said to have been fined $100 April 8, by Municipal Judge Fry, for conducting a hydropathic institution known as the "Ravenswood Sanitarium," without a license by the state.

Personal.—Dr. Jacob Frank has returned from a trip to Cuba.——Dr. Julius Grinker has been appointed a member of the consulting staff of the Cook County Hospital, vice Dr. Ferdinand C. Hotz, deceased.——Dr. and Mrs. William Cul-

bertson have returned from a visit to New Orleans.——It is announced that Drs. William A. Evans and Theodore B. Sachs are to be the first directors of the proposed Municipal Tuberculosis Sanatorium.

INDIANA

Academy Incorporated.—The Academy of Medicine, Elkhart, has been incorporated without capital stock for educational and social purposes by Drs. I. Wright Short, Fred N. Dewey, George W. Spohn, John C. Fleming and A. A. Norris.

Personal.—Dr. Fred A. Metts, Ossian, was operated on for appendicitis in Hope Hospital, Fort Wayne, March 23.——Dr. George F. Edenharter, superintendent of the Central Hospital for the Insane, Indianapolis, was re-elected for a term of four years, March 26, and the board adopted resolutions laudatory of his work.——Dr. Ephraim M. Folsom, Boonville, has been appointed professor of electrotherapeutics in Barnes Medical College, St. Louis.

Tuberculosis Colony.—The work of erecting cottages for the formation of a tuberculosis colony on the ground of the Indianapolis City Hospital began March 25, and the first patients have already been received for treatment. Four of the cottages are to be built by the Indiana Society of the American Red Cross and two by church societies. There are to be three two-room and three one-room cottages, and only patients in the incipient stage of tuberculosis will be received.

To Regulate Marriages.—The State Board of Health has determined to ask the next legislature to amend the law regarding marriage licenses, and make it even more stringent. It is planned to have marriage licenses issued jointly by the county health officer and the county clerk in order to reduce the minimum danger of transmission of disease through marriage. "It is believed by the state board that the economical solution of the problems of inebriety, insanity, epilepsy and other physical ailments is to be found in the regulation of the marriage relation. The simple law which we have now is operating to great advantage, but is not strong enough."

LOUISIANA

In Honor of State Society President.—Ouachita Parish Medical Society gave a banquet March 27, in honor of Dr. E. Denegre Martin, president of the Louisiana State Medical Association. Dr. James B. Woods of China was a special guest on the occasion, at which Dr. John H. McCaleb presided.

Extension Lectures at Tulane.—The course of extension lectures in connection with the Medical Department of Tulane University for April, includes a series of six lectures by Dr. F. Creighton Wellman, Washington, D. C., for a long time health officer in Portuguese East Africa, and an expert in the field of tropical medicine and natural history. This series of lectures is designed to present to the students of history, commerce, geography, economics and sociology and other educated persons those factors which have heretofore constituted a bar to the conquest of the tropics.

Personal.—Dr. J. Moore Soniat, New Orleans, has been appointed assistant inspector of communicable diseases.——Dr. William H. Taylor has been elected president and Dr. T. S. Jones a member of the board of health of St. Francisville.——Dr. Shelton I. Colvin has been elected mayor of Gibsland, and Dr. Andrew J. Pennington a member of the executive committee.——Dr. Stephen W. Stafford, New Orleans, has been made first assistant resident surgeon in the Charity Hospital, New Orleans.——Dr. P. T. Talbot has been appointed inspector of the State Board of Health and assistant in clinical laboratory work.

Annual Meeting of Hospital.—The Presbyterian Hospital, New Orleans, at its annual meeting, elected officers, a visiting medical board, consisting of Drs. John F. Oechsner, Edward L. McGehee, C. Jefferson Miller, David L. Watson and G. Farrar Patton, and a visiting staff consisting of Drs. John T. Halsey, G. Farrar Patton, Charles C. Bass, Robert J. Mainegra, Herman B. Gessner, William M. Perkins, Philip W. Bohne, Edmund L. Leckert, R. D. Schimmelpfennig, Clarence May, Hamilton P. Jones, E. E. Patton, Richard W. Salter and J. Phares O'Kelley. It was decided to start actively the collection of funds for a hospital site, as the present quarters on Carondelet street are not adequate.

MARYLAND

Baltimore

Lectures on Nutrition.—A course of lectures on "Nutrition" is to be delivered in the Women's College by Prof. William J. Gies, New York City; William H. Howell, Baltimore; H. P. Armsby, Pennsylvania, and C. W. Stiles, chief of the division of zoology in the U. S. P. H. and M.-H. Service.

Sanatorium Nearly Ready.—The Pine Bluff Sanatorium Company has completed the main and tent buildings, which will be opened this month. The institution is intended for consumptives; is located on the Wicomico river, near Salisbury, is surrounded by pine woods, and will accommodate more than 100 patients.

In Memoriam.—A stained glass window has been erected in St. Timothy's Church, Catonsville, in memory of the late Dr. Charles G. W. MacGill, who was a vestryman of the church. The window, which was donated by Mrs. MacGill, depicts St. Luke, the beloved physician, standing in a garden bearing a scroll on which is written "One was given the gift of healing by the spirit."——A tablet in commemoration of Edgar Allan Poe was unveiled in the rotunda of the Church Home and Infirmary, in which the poet died. The tablet was presented by Dr. Thomas S. Cullen.

Blow at Cocain Law.—It has been decided by the courts that the state must present expert testimony in prosecution of the alleged violators of the cocain law, in order to get conviction. The case in point is that in which Dr. Ralph J. Schirman, West Baltimore, was alleged to have prescribed cocain for Annie Miller, and was heard April 6 in the criminal court. Evidence was adduced that the defendant had prescribed cocain, but for medicinal purposes, as the patient was addicted to the use of the drug. The judge stated that unless the state could prove beyond the peradventure of a doubt that the accused had not given the proper medical treatment, he could not find him guilty. The state had failed to do this and the judge dismissed the defendant. Five other similar suits against Dr. Schirman were postponed to allow the state to get the necessary evidence, and the defendant was released on his own recognizance.

MASSACHUSETTS

Medical Examiners Appointed.—The governor has appointed the following physicians medical examiners: Drs. Edward H. Baxter, Hyde Park; John Lowell Bacon, Southboro; and Charles S. Knight, Westboro.

Medical Club Election.—At the annual meeting of West Roxbury Medical Club April 1, Dr. Frances P. McKenna was elected president; Dr. Burt N. Bridgeman vice-president, and Dr. Edwin T. Rollins, secretary-treasurer. Dr. Edward W. Taylor delivered the address of the evening on "Quacks and Quackery."

Bequests.—By the will of the late Nancy Harding Forsdick, $3,000 is bequeathed to the Floating Hospital, Boston, and $5,000 to the Boston Dispensary, and $5,000 to Dr. Robert A. Blood, Brookline.——By the will of the late Mrs. Margaret E. Langdell, $10,000 is devised to the Cambridge Hospital, and the same sum to the Holy Ghost Hospital, Cambridge.

Personal.—Dr. C. A. Drew, medical director of the Bridgewater State Farm, has been appointed superintendent of the Worcester City Hospital, vice Dr. Thomas Howell.——Dr. Charles H. Morrow has been elected chairman of the board of health, and health officer of Gloucester.——Dr. John Parr, Methuen, has been appointed town physician.——Dr. David Cheever, Boston, who has been ill with bronchitis, is reported to be improving.——Dr. George S. Cahill, North Cambridge, charged with performing an illegal operation last June, was found not guilty by a jury in the Middlesex Superior Court, March 23.

MICHIGAN

Antituberculosis Society Organized.—The Delta County Antituberculosis Society was organized at Escanaba recently with Dr. J. Charles Girard as president and Dr. Oscar C. Breitenbach, secretary. The principal address was given by Dr. Breitenbach on "Sanitation and the Municipality."

Personal.—Dr. David J. Levy, secretary of the Kalamazoo Board of Health, has resigned.——Dr. George W. Lowry, Hastings, has recovered from a serious attack of septicemia due to an operation wound.——Dr. Archibald M. Walters, Detroit, who was arrested in Toronto charged with fraud in connection with a mining deal, was acquitted, March 26.——The perjury case against Dr. George A. Fritch was dismissed April 2, on motion of the prosecutor on account of insufficient evidence.

Banquet for Dr. Breakey.—The Ann Arbor Club and the Washtenaw County Medical Society, gave a banquet March 31 at the University Club, Ann Arbor, in honor of Dr. William

Fleming Breakey, clinical professor of dermatology and syphilology in the University of Michigan in celebration of the fiftieth anniversary of Dr. Breakey's entrance into the practice of medicine. Victor C. Vaughan presided as toastmaster. President James B. Angell spoke on "Dr. Breakey as a Teacher"; Dr. Ernest L. Shurly, Detroit, on "Dr. Breakey as a Friend;" Dr. James C. Willson, Flint, on "Dr. Breakey as a Classmate"; Dr. Meyer L. Heidingsfeld, Cincinnati, on "Dr. Breakey as a Dermatologist"; Dr. Junius A. Beal, regent of the university, on "Dr. Breakey as an Executive;" and Colonel Henry O. Dean, on "Dr. Breakey as a Soldier;" and the guest of honor made the last address of the evening. Dr. Breakey was presented with a silver loving-cup by his friends and colleagues of the Ann Arbor Medical Club, the Washtenaw County Medical Society, and the profession at large, the presentation speech being made by Dr. Charles B. de Nancrede. In the afternoon the senior class of the university presented Dr. Breakey with a gold-headed cane, Benjamin P. Winfell making the presentation speech.

MINNESOTA

Sanatorium Assured.—The bill of Senator Dunne for a municipal sanatorium and industrial school for crippled children at Phalen Park was passed by the house under suspension of rules. The bill carries with it an appropriation of $55,000. Citizens of St. Paul have contributed twenty-three acres of land for a site and $5,000 in cash.

Physician Convicted.—Dr. William C. Van Damme, Minneapolis, charged with criminal practice in connection with the now famous "suitcase baby," is said to have been found guilty and sentenced to imprisonment for five years in the penitentiary. This is said to have been the second time he has been convicted for an offense of a similar nature in eight years.

Tax for Medicine Peddlers.—A bill to regulate the license of itinerant vendors of medicine, nostrums and appliances for the treatment of diseases has been introduced by Representative J. T. Johnson, Fergus Falls. The bill provides that licenses, the fee for which is fixed at $100, must be obtained from the board of pharmacy and that applicants must satisfy the board that the articles are not dangerous to health or intended for any unlawful or immoral purposes.

Society Meeting.—At the annual meeting of the Brown-Redwood Counties Medical Society, March 30, the following officers were elected: President, Dr. Frank D. Gray, Vesta; vice-president, Dr. James L. Adams, Morgan; secretary-treasurer, Dr. William A. Brand, Redwood Falls; censor, Dr. Giles R. Pease, Redwood Falls; delegate to the state society, Dr. George F. Reineke, New Ulm, and alternate, Dr. Gilbert L. Gosslee, Wabasso.

Personal.—Dr. John Jackola, Duluth, sailed for Germany April 1.——Dr. Martin J. Taylor, Janesville, suffered an attack of cerebral hemorrhage March 27.——Dr. Charles C. May has been elected health officer of Adrian.——Dr. James A. Quinn, St. Paul, has been appointed a member of the State Board of Health, vice Dr. James B. McGaughey, Winona, deceased.——Dr. Arthur B. Ancker, St. Paul, has been re-elected superintendent of the City and County Hospital.

Physicians Exonerated.—The suit against Dr. Charles B. Lenont, Virginia, who conducts a hospital in that town, brought by Christ Christopherson, who alleged that his fractured arm was improperly set, was dismissed before Judge Dibell, who ruled that there had been no malpractice.——The jury in the Duluth District Court, March 24, decided that Dr. J. Hjalmar Jern, West Duluth, was not guilty of malpractice in his treatment of Hilding Gradine, who sued for $25,000, claiming that Dr. Jern had made an erroneous diagnosis.——The school board of Swanville has dropped its case against Dr. Henry M. Bracken, secretary of the State Board of Health, who was arrested March 20 on a charge of assault and battery. The case arose from a dispute between the town health physician and the principal of the school regarding a recent epidemic of diphtheria in the village.

NEBRASKA

College Will Be Enlarged.—Creighton University has purchased for $12,200, lots across the alley from Creighton Medical College, where an annex will be built.

Casualty Association Election.—At the annual meeting of the Physicians' Casualty Association in Omaha, Dr. De Witt C. Bryant, Omaha, was elected president; Drs. Dellizon A. Foote, Omaha, and Charles M. Schindel, South Omaha; Vernon L. Traynor, Council Bluffs, Iowa; and Adam R. Ray, Fairfield, vice-presidents, and E. E. Elliott, Omaha, secretary-treasurer.

Gift to Medical College.—Gurdon W. Wattles, Omaha, has promised to give at least $100,000 or more if necessary for the founding of the Orthopedic Hospital as a part of the enlargement of the College of Medicine of the University of Nebraska, to be built in Omaha. Two other Omaha men have signified their intention of giving fifty or seventy-five thousand dollars each toward the building of the institution. The legislature has passed a bill appropriating $20,000 for a site.

Personal.—Dr. Brice A. Corbin, Schuyler, has retired from practice on account of ill health.——Dr. Percival has assumed charge as superintendent of the Norfolk Hospital for the Insane, vice Dr. Young, who is studying in Europe.——Dr. John B. Jack, surgeon for the Burlington Volunteer Relief, Omaha, has been promoted to a similar position with the organization in Chicago, and has been succeeded by Dr. C. M. Comlin, Omaha.——Dr. Harry D. Burchard has been appointed city physician and chief health inspector of Falls City.

Pathological Club.—The Pathological Club of the College of Medicine of the University of Nebraska, in its program for the year, takes up many subjects of deep interest to the profession, such as the Emmanuel movement, the plague, medical teaching, sanitary triumphs at the Panama Canal, etc. On April 1, the club gave a dinner in honor of Dr. T. Creighton Wellman, who delivered an address on "Tropical Diseases and Their Relation to Temperate Climates," in which he made especial mention of leprosy, bubonic plague and Asiatic cholera. He stated that the deadly African climate was not so deadly as was actually believed, as its diseases were well-known and definite means of guarding against them could be taken by the forewarned traveler.

NEW JERSEY

Personal.—The board of managers of the New Jersey Sanatorium for Tuberculosis has elected Dr. William S. Jones, Camden, president.——Dr. John H. Moore has been elected secretary of the board of health of Bridgeton.

Osteopaths Recognized.—On April 6, the Senate, after considerable discussion, passed a measure, known as the state medical society bill. This gives the osteopaths one member on the State Medical Examining Board and a legal status as practitioners.

Hospital Association Elects Officers.—At a meeting of the Physicians' Hospital Association of Vineland, April 1, the following officers were elected: President, Dr. Waldo F. Sawyer; vice-president, Dr. John S. Halsey; secretary, Dr. Morris R. Faulkner; and treasurer, Dr. George Cunningham.

Prescriptions for Liquor.—A committee composed of Drs. John W. Wade, Millville; S. Thomas Day, Port Norris; and David H. Oliver, Bridgeton, has been appointed by the Cumberland County Medical Association to investigate the charges that some practitioners have been writing indiscriminate prescriptions for liquor. The committee will try to convert the lawbreakers and induce them to join the association and discontinue their present evil practices.

Inebriates and Near-Insane.—At the request of Dr. Henry A. Cotton, medical director of the State Hospital for the Insane, Trenton, two bills have been introduced by Senator Levitt, one providing for the commitment of confirmed inebriates to the hospital and the other making provision for the admission into any institution for the insane for treatment of those on the border line of insanity or who believe themselves to be in danger of losing their reason.

NEW MEXICO

Sanatoria.—The Sunnyside Ranch, a tuberculosis sanatorium on the cottage plan, located a mile and a half north of Silver City, has been opened under the charge of Dr. LeRoy S. Peters.——A new sanatorium is to be built by the Sisters of Charity in Santa Fe at a cost of about $100,000.——The United States government has authorized the expenditure of $374,000 for improvements at the United States General Hospital, Fort Bayard. Of this sum $214,000 is to be used for the construction of officers' and nurses' quarters and the balance for a steam laundry, power plant, and ward buildings for patients.

Society Meetings.—At the annual meeting of Bernalillo County Medical Society, held in Albuquerque, the following officers were elected: Dr. Walter W. Spargo, president; Drs.

Lucien G. Rice and Harry B. Kauffman, vice-presidents; Dr. John R. Haynes, secretary; Dr. Eligio Osuna, treasurer; Dr. Daniel H. Carns, censor, and Drs. Walter G. Hope and Charles A. Frank, delegates to the state society.——The Torrance County Medical Society has been organized at Estancia with an initial membership of 11, and the following officers: Dr. Christian J. Amble, Manzano, president; Dr. William A. Wilson, Willard, vice-president; Dr. Charles D. Ottoson, Willard, secretary; and Dr. William E. Sunderland, Estancia, treasurer.

NEW YORK

Dinner to Staff.—A dinner was given March 26, by the trustees of the Syracuse Free Dispensary to the physicians and surgeons of the staff of the institution, numbering about thirty.

The Woods Bill Signed.—The governor has signed this measure, which provides for the appointment of health officers through the state outside of cities by local health boards, instead of by the state commissioner of health, after nomination by local health boards.

Tuberculosis Mortality.—The mortality statistics of the department of health show 16,437 deaths in the state from tuberculosis last year. On the accepted basis of reckoning there are at least 150,000 living sufferers from this disease in the state of New York, and to receive these cases there are 1,256 hospital beds outside of New York City.

For the Improvement of the Human Race.—A bill has been introduced directing the State Health Commissioner to appoint two scientific experts to study the problem of improving the quality of the people of the state. Their duties include the investigation of the influence of environment on the quality of individuals, and the publication of recommendations warranted by their studies for the improvement of the human race in this state by means of proper birth and favorable environment. These experts are called on to suggest such limitations of marriage and childbirth as may raise the quality of the people.

Unique Bill Before the Legislature.—An important bill providing for the establishment of county or local hospitals for the care of persons suffering from tuberculosis was introduced in the senate April 1. One provision of this bill is that these hospitals may take private patients as well as those whose care is paid for by the county either entirely or in part. This hospital will be in charge of an administrative superintendent responsible to a board of managers, appointed by the board of supervisors. This bill was drafted by the State Charities Aid Association after exhaustive study of recent legislation, and reports of special commissions, both in the United States and abroad.

Personal.—The medical staff of Rome Hospital has elected Dr. Arthur A. Gillette, president; Dr. Gilbert N. Lehr, vice-president; Dr. Howard J. Teller, treasurer, and Drs. Eliza M. Ellinwood, Thomas P. Scully and Henry D. White, committee on attending staff.——Dr. William H. Beattie has been elected a member of the Utica General Hospital medical staff in the gynecological service, vice Dr. Willis E. Ford, resigned. ——Drs. Charles E. Chase, Sands C. Maxon and Arthur R. Grant have been appointed a committee to consider the matter of a consulting staff for the institution, and Dr. John D. Jones has been elected a member of the executive committee of the medical staff to succeed Dr. Ford, resigned.

Hospitals Acquire Property.—Dr. Albert W. Ferris, chairman of the State Lunacy Commission, has announced that a site for the proposed Long Island Hospital has been purchased at Greenvale, L. I. This site consists of 548 acres of land, 75 per cent. of which is tillable. The property was acquired in the face of bitter opposition on the part of wealthy residents of that part of Long Island. It is the intention of the commission to spend about $2,570,000 on the entire plant. It is planned to lay out the land in the form of a park and the buildings will not resemble the monastic type so common in similar institutions.——The Matteawan State Hospital for the Criminal Insane has purchased about 130 acres of farm land out of the appropriation of $15,000 for this purpose by the last legislature.

Society Meetings.—The Women's Medical Society of the State of New York, at its third annual meeting, held in Rochester, March 12, elected the following officers: Honorary president, Dr. Sarah R. Adamson Dolley, Rochester; president, Dr. Eliza M. Mosher, Brooklyn; vice-presidents, Drs. Mary B. Jewett, New York City; Evelyn Baldwin, Rochester, and Jane Wall Carroll, Buffalo; secretary, Dr. Eveline P. Ballintine, Rochester; treasurer, Dr. Harriet M. Turner, Rochester, and councilors, Drs. Martha Wollstein, New York City; Anna Craig, Kings Park; Mary Gage-Day, Kingston; Julia Kimball, Amsterdam; Florence I. Staunton, Utica; Anna White Marquis, Norwich; Kathleen L. Buck, Rochester; and Maud J. Frye, Buffalo. In the evening the annual dinner was held, which was largely in celebration of the eightieth birthday of the honorary president. Dr. Helen C. Putman, Providence, R. I., who delivered an address on "The Efficient Teaching of Hygiene and Morals in the Public Schools," was elected to honorary membership in the society.——At the annual meeting of the Utica Medical Club, held March 11, Dr. Charles H. Baldwin was elected president; Dr. William Moffat, vice-president, and Dr. John Groman, secretary-treasurer.

New York City

Preventive Medicine.—Lecture and laboratory courses in tropical medicine, public health and sanitation, including school and factory inspection, have been inaugurated at the New York Post-Graduate Medical School and Hospital, and will be given by officers of the medical corps of the Army and Navy.

Tribute to Dr. Michaelis.—The medical profession of this city, under the auspices of the Metropolitan Medical Society, visited the grave of Dr. Ludwig M. Michaelis April 11, planted a memorial laurel tree, and erected a bronze tablet to his memory. The Rev. Stephen Wise delivered the memorial address.

To Visit Every Baby.—The Bureau of Child Hygiene of the department of health has employed 140 nurses, one of whom will be sent into every home, after the receipt of the birth certificate, beginning April 15. As the summer progresses this number will be increased. If the mother is intelligent and the baby healthy, the first visit will be the last, but if either instruction or care is needed, the case will be assigned to the agency best adapted to give relief.

Will Support the Junior Sea Breeze Work.—John D. Rockefeller has authorized the New York Association for Improving the Conditions of the Poor to open Junior Sea Breeze Hospital at Sixty-fourth street and East River. Mr. Rockefeller has maintained this hospital for children for the past three summers. A larger staff of visiting nurses will be employed during the coming season and the hospital will be completely renovated. There will be day classes for mothers and children.

Changes at the College of Physicians and Surgeons.—Dr. William G. MacCallum of Johns Hopkins University will take the chair of pathology. At his own request, Dr. Walter B. James has been transferred from the Bard professorship, which involved the administration of the department, to a professorship of clinical medicine, and Dr. Theodore C. Janeway and Dr. Evan M. Evans have been promoted, the former to the Bard professorship and the latter to a newly-created professorship of clinical medicine.

Personal.—Dr. Linsly R. Williams has sailed for Europe, where he expects to make a study of the work carried on in the large milk depots of Germany for purposes of comparison with that done in this country.——Dr. Achilles Rose, whose efforts in behalf of a reform in medical onomatology are well-known, leaves New York April 20, and expects to spend the remainder of his life in Athens, where his labors as a philhellene will undoubtedly assure him a warm reception. ——Dr. Thomas W. Burnette, ambulance surgeon of the New York Hospital, was seriously injured in a collision between the ambulance and a street car, March 27.——The consulting, attending and assisting staff at the Cumberland Street Hospital, Brooklyn, gave a testimonial reception March 30, to Dr. Charles B. Bacon, superintendent of the hospital, who has accepted the superintendency of the City Hospital, Blackwell's Island. A gold watch was presented to Dr. Bacon by Dr. Simmons in behalf of the staff of the hospital; the nurses of the institution presented him with a marine painting, and the employés gave him a pair of candelabra and a clock.——Dr. Russell Burton-Opitz, adjunct professor of physiology in Columbia University, has been appointed head of the department of physiology.

Buffalo

Pleads for Cancer Laboratory.—Dr. Harvey R. Gaylord of the New York State Cancer Laboratory, in his annual report to the State Health Commission, pleads for an appropriation of at least $25,000 for the work of the laboratory.

Personal.—Dr. and Mrs. Edmond E. Blaauw have gone to Naples.——The civil service commission has reported that the following physicians have passed the highest examination for the surgeons in the police and fire departments: Drs. Edwin A. Bowermann, Herman K. DeGroat, Thew Wright, Thomas J. Walsh, Edward E. Haley, William T. Getman, and Carroll J. Roberts.

Choice of Two Sites.—The sub-committee on sites appointed by the commission which is considering plans for a municipal hospital for contagious diseases, has considered twenty sites, and from this has selected two, one opposite the German Roman Catholic Asylum which can be obtained for $60,000, and the other containing six and three-quarters acres, which adjoins the present quarantine hospital, and can be purchased for $28,000.

Asks Large Appropriation.—Dr. Julius Ullman has instituted a new element in the discussion of contagious diseases by declaring that the city should appropriate $50,000 a year to combat scarlet fever and diphtheria. The German Hospital has proposed to the commission to furnish a site for a tuberculosis hospital providing the city will construct and equip a building to cost $62,500, and to furnish accommodation for 50 tuberculosis patients.

NORTH CAROLINA

Society Meeting.—At the annual meeting of the Rutherford County Medical Society, Dr. Thomas B. Lovelace, Henrietta, was elected president; Dr. Edgar B. Harris, Rutherford, vice-president, and Dr. William C. Bostic, Forest City, secretary-treasurer.

Dispensaries Open.—The Durham City and County Dispensary for the Treatment of the Throat and Lungs was opened April 1. Treatment is free to citizens of the county and city of Durham.——The Charity Aid Society of Greenville is perfecting plans to establish a free clinic in the Greenville Infirmary to be opened for two hours each day, for those unable to pay for medicine and medical advice.

Personal.—Dr. Addison E. Brentzer, Charlotte, who has been studying in Europe for two years, will soon return and locate in Charlotte.——Dr. Thomas Stringfield, Waynesville, has been reappointed inspector general of the N. C. N. G., with the rank of colonel.——Mr. J. L. Ludlow, civil engineer of the state board of health, has been reappointed chief of engineers of the N. C. N. G., with the rank of colonel.——Dr. Watson S. Rankin, Wake Forest, has been elected secretary of the state board of health, vice Dr. Richard H. Lewis, Raleigh, resigned.——Dr. Francis Duffy, Newbern, has been appointed director of the Central Hospital board, Raleigh

OHIO

Revocation of License to Practice.—By unanimous vote the Ohio State Board of Medical Registration and Examination, at its meeting April 6, is said to have revoked the certificate to practice of Dr. Alphonso Eratus, Cincinnati, on account of unprofessional conduct and gross immorality.——Drs. Alexander B. Barker, Dayton, and Albert C. Goode, Cleveland, have secured injunctions against the State Board of Medical Registration and Examination to prevent the board from revoking their licenses.

Personal.—Dr. Albert V. Phelps, professor of Anatomy in, and secretary of, the Medical College of Ohio, Cincinnati, has resigned both positions.——Edward Ness, Jr., Cincinnati, has been appointed a member of the Ohio State Pharmacy Board.——Dr. T. Addison McCann, Dayton, has been appointed a member of the State Board of Medical Registration and Examination by the governor to succeed Dr. Henry E. Beebe, Sidney.——Dr. Frank E. Fee, Cincinnati, sailed from New York for Europe, April 7.

PENNSYLVANIA

Nurses' Bill Passes the House.—The Nurses' Registration Bill was passed finally, April 9, by the House by a vote of 121 to 52. This is the second attempt of the Graduate Nurses' Association to secure legislation for the betterment of their profession. The bill provides a state board of examiners for graduate nurses. It does not prohibit unregistered nurses from practicing, but it makes it illegal for them to use the term "registered nurse."

Hospital Opened.—The formal opening exercises of the Oliver Annex to the South Side Hospital, Pittsburg, were held March 25, which included an afternoon reception from 2 to 5, an evening reception from 7 to 10, and dedicatory exercises at 8:30. The annex contains on the fifth floor an operating suite and 12 private rooms; on the fourth floor 20 private rooms; on the third floor wards for women and children and an obstetrical department; on the second floor, the men's medical ward; on the first floor the men's surgical ward, and in the basement, hydrotherapeutic, electrotherapeutic and *x*-ray departments. The institution now can accommodate 250 patients.

Personal.—Dr. H. M. Hiller, Chester, has been appointed Medical Inspector for Delaware county.——Dr. Franklin Hinkle, Columbia, the oldest living graduate of the Medical Department of the University of Pennsylvania in practice, celebrated, on April 3, his sixty-third anniversary as a practitioner. Dr. Hinkle graduated from the university on April 3, 1846.——Dr. John J. Light has been re-elected resident surgeon of the Good Samaritan Hospital, Lebanon.——Dr. John J. Beilheimer, Priceburg, who has been suffering from a fractured leg, has been obliged to have it refractured and reset.——Dr. Julius H. Comroe, York, has been elected a member of the staff of York Hospital.

Philadelphia

Testimonial to Dean Holland.—The students, associates, and friends of Dr. James W. Holland, dean of Jefferson Medical College for twenty-one years, have arranged to secure a suitable portrait of him and present it to the college, as a mark of esteem in which he is held by them. Subscriptions of not exceeding $5 will be received by the committee in charge, and checks may be made to the order of H. Augustus Wilson, treasurer, or any other member of the committee.

Hospital News.—Dr. Joseph S. Neff, director of the Department of Health and Charities, awarded a contract for $7,400, April 10, for the construction of a wood and glass tuberculosis hospital at Byberry, on the completion of which tuberculosis patients in the Philadelphia General Hospital will be removed to the new hospital.——The Frederick Douglas Memorial Hospital, which has been erected at a cost of $100,000 and will accommodate about 100 patients, was dedicated with appropriate ceremonies, April 15.

Tuberculosis Exhibition for State.—Arrangements were made, April 10, to send the exhibit of the Pennsylvania Society for the Prevention of Tuberculosis to different towns throughout the state. Thus far, arrangements have been made for the exhibition to visit Quakertown, Perkasie, Sellersville, Telford, Souderton, Lansdale and other smaller towns. A similar display sent out last year by the society was visited by 154,732 persons. Those towns wishing to have the exhibit may make arrangements with Wallace Hatch, executive secretary of the society, Philadelphia.

Personal.—Dr. W. M. Late Coplin, medical director of the Jefferson College Hospital, was tendered a testimonial dinner by the visiting staff of the institution April 8.—Dr. Edward E. Montgomery was the guest of honor at the annual banquet of the Wilmer Krusen Gynecological Society of Temple University on April 10.——Dr. Joseph S. Neff was the guest of honor at the annual banquet of the Medical Club, April 16.——Dr. John B. Roberts, while on a recent visit to Pensacola, Fla., as the guest of Dr. Louis De M. Blocker, read a paper before the state medical society.

TENNESSEE

Commencement Exercises.—On April 26, a class of 24 will be graduated from the medical department of the University of Chattanooga.——A class of eight was graduated from the medical department of the University of West Tennessee, Jackson, April 8. The addresses of the occasion were delivered by Dr. Lloyd T. Miller, Yazoo City, Miss., and Rev. R. A. Adams.

Personal.—Dr. Louis Leroy, Memphis, has been appointed a member of the State Board of Embalmers.——Drs. Charles N. Cowden, Perry Bromberg, and Lucius E. Burch, Nashville, have been appointed by the Davidson County Academy of Medicine a committee to name a staff of physicians for the municipal free dispensary for tuberculosis.——Dr. James W. Reed has been elected mayor of Belfast.

TEXAS

To Establish Pasteur Institute.—Dr. Benjamin M. Worsham, El Paso, formerly superintendent of the State Insane Hospital, Austin, announces his intention of establishing a Pasteur Institute in El Paso at an early day.

Personal.—Dr. Thomas B. Bass, assistant superintendent of the Epileptic Colony, Abilene, has been elected superintendent, vice Dr. John R. Preston, and Dr. Manton M. Carrick, Dallas, succeeds Dr. Bass as assistant superintendent.——Dr. Judson M. Andrews, Wharton, has been appointed health officer and jail

physician for Wharton county.——Dr. Robert F. Williams, El Paso, has been appointed superintendent of the Virginia State Tuberculosis Sanatorium, the "Catawba Sanatorium."——Dr. Walter N. Vilas, El Paso, has been reappointed physician of El Paso county.——Dr. Garland B. B. Fosene, Waco, a member of the State Board of Medical Examiners, has resigned.

Sanatorium Bill Vetoed.—The governor, on April 1, vetoed the bill creating a tuberculosis sanatorium. His reasons for vetoing the bill were as follows: "I have carefully considered this measure and believe that the large expenditure contemplated with facilities for only 200 patients, taken from the thousands now suffering from this dread disease in our state, demonstrates the impracticability of dealing with this important question in the manner proposed and outlined by this bill, and it is therefore disapproved. The taking of so small a number into a sanatorium from the great number of sufferers from tuberculosis in this state would not meet the situation and would hardly justify the heavy expenditure required at this time, and incident to the maintenance of such institution hereafter."

Physicians Appointed on Boards of State Institutions.—The following physicians have been appointed by the governor as members of the board of trustees of state institutions: Drs. James W. McLaughlin, Austin, and Ashley W. Fly, Galveston, board of regents of the University of Texas; Dr. Goodall H. Wooten, Austin, board of trustees of the State Lunatic Asylum; Dr. Robert M. Wickline, Austin, board of trustees of the State Blind Institute; Dr. Lewis L. Lacey, Austin, board of trustees of the Deaf and Dumb Asylum; Dr. Luther A. Grizzard, Abilene, board of trustees of the State Epileptic Colony, and Drs. Edwin P. Becton, Greenville; James D. Osborne, Cleburne; William B. Collins, Lovelady; Robert H. McLeod, Palestine; John J. Dial, Sulphur Springs; John D. Mitchell, Fort Worth; Marquis E. Daniel, Honey Grove; R. O. Braswell, Fort Worth; Thomas J. Crowe, Dallas; John P. Rice, Alpine, and J. F. Bailey, Waco, state boards of medical examiners.

WISCONSIN

Amsterdam Professor Lectures.—Dr. Frederick Van Eeden, Amsterdam, who twenty years ago established the first clinic for the mental treatment of diseases, delivered a special lecture on this subject at the University of Wisconsin, Madison, March 23.

Personal.—Dr. Uranus O. B. Wingate has retired from the Fox Lake Sanatorium and will resume professional work in Milwaukee.——Dr. S. Breck Ackley, Oshkosh, on the eve of his departure to Waukesha, was presented with a diamond-studded gold locket and fob by the members of the Oshkosh Medical Club.

The Christmas Stamp Campaign.—According to the report of the Wisconsin Antituberculosis Association, the net proceeds from the sale of Red Cross Christmas stamps amounted to $8,754.88. This money will be used for educational purposes, to send out pamphlets and traveling exhibits, and for lectures and demonstrations.

Campaign Against Plaster Specialist.—The physicians of Polk, Barron, Burnette, and Washburne counties are planning a campaign against John Till, a specialist of Almena, who purports to cure all diseases with certain ointments and plasters, the composition of which are secrets known to him alone. It is planned to institute criminal proceedings, alleging violation of the state law which prohibits the practice of medicine without a license.

GENERAL NEWS AND COMMENT

Librarians to Meet.—The twelfth annual meeting of the Medical Library Association will be held in Washington and Baltimore, May 12 and 13, under the presidency of Dr. George Dock, New Orleans. The association was founded in 1898 and has for its object the fostering of a medical library and the maintenance of an exchange of medical literature among its members.

Society Meetings.—The Society of Clinical Surgery met at Johns Hopkins Hospital, Baltimore, April 2 and 3, and elected the following officers: President, Dr. John M. T. Finney, Baltimore; vice-president, Dr. Rudolph Matas, New Orleans; secretary, Dr. James G. Mumford, Boston, and treasurer, Dr. Charles H. Frazier, Philadelphia.——The American Association of Pathologists and Bacteriologists, at its annual meeting in Boston, April 8, elected Dr. Frank B. Mallory, Boston, president; Dr. Philip H. Hiss, Jr., New York City, vice-president; Dr. Harold C. Ernst, Boston, secretary, and Dr. Herbert W. Williams, Buffalo, N. Y., treasurer. It was decided to hold the next annual meeting in Washington in May, 1910.

The Carroll Fund.—The following contributions to the Carroll Fund have been received since the publication of the list in THE JOURNAL, April 3:

Previously reported	$2,504.95
Dr. Julius Noer, Stoughton, Wis.	2.00
Dr. Francis Schill, Jr., Johnstown, Pa.	2.00
Dr. R. H. Ward, Troy, N. Y.	5.00
Dr. L. C. Benkert, Columbus, Ohio	2.00
Dr. W. G. Christian, Gordonsville, Va.	2.00
Dr. C. F. Hewins, Loda, Ill.	1.00
Dr. E. C. Levy, Richmond, Va.	5.00
Dr. M. G. Seelig, St. Louis	1.00
Dr. Arthur A. Small, Chicago	10.00
Dr. Charles H. Smith, Uniontown, Pa.	5.00
D. E. W., Buffalo, N. Y.	2.00
Dr. A. L. Wilson, Lynchburg, Va.	2.00
Dr. Evangeline W. Young, Boston	2.00
Dr. Augustus A. Eshner, Philadelphia	5.00
Dr. Francis B. Harrington, Boston	10.00
Dr. Simon Flexner, New York	10.00
Dr. Harold Williams, Boston	5.00
Dr. James G. Fisher, Rossiter, Pa.	5.00
Dr. Chas. J. White, Boston	5.00
Dr. W. E. Bestwick, Algonac, Mich.	1.00
Medical Association, Canal Zone, Panama	100.00
Calumet Branch, Chicago Medical Society, Pullman, Ill., Dr. John McLean, Dr. Frederick A. Bonthius, Dr. F. B. Moore, Dr. James W. Kelly, Dr. G. A. Post, Dr. Soren S. Noraman, Dr. R. C. Liberton, Dr. J. S. Kauffman, Dr. G. Selm, Dr. F. Maguy	10.00
Dr. Thomas J. Watkins, Chicago	5.00
Dr. Theodore Bratrud, Warren, Minn.	5.00
Dr. Thos. C. Phillips, Milwaukee	5.00
Dr. Howard Lilienthal, New York	5.00
Dr. Douglas C. Moriarta, Saratoga Springs, N. Y.	5.00
Dr. C. B. Burr, Flint, Mich.	5.00
Dr. Warren Coleman, New York	10.00
Dr. Jas. A. King, Millsville, Mass.	1.00
Dr. R. L. Randolph, Alexandria, La.	5.00
A Physician of Louisiana	5.00
Dr. Anders Frick, Chicago	2.00
Dr. Hugh Mullarky, Manson, Iowa	1.00
Jefferson County Medical Society, Beaumont, Tex.	16.00
Mecklenburg County Medical Society, Charlotte, N. C.	10.00
Waseca County Medical Society, Waseca, Minn.	10.00
Dr. H. H. Rightor, Helena, Ark.	1.00
A Physician of El Paso, Tex.	1.00
Dr. Emil Ries, Chicago	10.00
Dr. Charles O'Donovan, Baltimore	10.00
	$2,808.95

Subscriptions will be acknowledged in subsequent issues of THE JOURNAL. There is still a balance of $4,800 needed to raise the mortgage on this property. Surely the medical profession of the country will do this much for the widow of James Carroll. Secretaries of county societies are requested to bring this matter to the attention of their societies at the first opportunity. The letter below is published as suggestive in this connection:

To the Editor:—I want to tell you one result of your editorial in THE JOURNAL, April 3, appealing for funds for Dr. Carroll's widow and family. Last Sunday, in looking over THE JOURNAL, I noticed Major Ireland's letter and your editorial, both of which touched my heart deeply. The Rockland County (N. Y.) Medical Society held its quarterly meeting to-day and I moved that the chairman appeal for aid in response to the resolution presented in Major Ireland's communication, and that every man in the society subscribe $1. A motion was adopted authorizing the treasurer to send a check for thirty odd dollars to Major Ireland at once. I trust that every county society will do likewise, and that physicians in Mexico, Cuba, Central and South America will also contribute. S. W. S. TOMS, Nyack-on-Hudson, N. Y.

Send all contributions to

MAJOR M. W. IRELAND,
Surgeon-General's Office, War Department, Washington, D. C.

Manila Medical Society.—The annual report of the secretary-treasurer of the Manila Medical Society shows that the average attendance at the monthly meetings was 23.2; that forty papers, cases and specimens were presented before the society; that during the year 22 members had left the islands and 43 new members had been received, making a total membership of 91. At the special cholera meeting, held in October, a resolution was passed addressed to the governor-general, stating it to be the sense of the society that the proper disposal of human excreta was the greatest single sanitary need of the Philippines, and asking that a special commission be appointed to make a practical study of the problems connected therewith.

Annual Report of the Public Health and Marine-Hospital Service.—In the annual report of the P. H. and M.-H. Service of the United States for the fiscal year ended June 30, 1908, Surgeon General Walter Wyman takes up successively the plague situation in San Francisco, and measures adopted for the sanitary rehabilitation of the city; the present pandemic of plague; scientific research and sanitation work undertaken; the supervision of vaccines, sera, etc.; investigation regarding tuberculosis, typhoid fever, hook-worm disease, rabies, leprosy, and pellagra; the relation of milk to disease; examination of water; identification of fleas; investigation of appliances advertised for the treatment of diseases; relations to the Pharmacopeia, and to the American Pharmaceutical Association. He states that one of the most important reforms in the history of American medicine has been accomplished through the work of the Council on Pharmacy and Chemistry of the American Medical Association, by which many frauds have been uncovered, unwarranted claims in advertisements have been given new light, manufacturers have been compelled to state the true contents of medicines exploited, and many other reforms have been inaugurated looking to the general uplift of the medical and pharmacal professions. During the fiscal year the activities in the hygienic laboratory have increased in scope. An addition to the building, for which $75,000 was appropriated by Congress, is practically completed, and a further addition is needed to provide necessary space for experimental and routine work, and to afford room for classes of student officers of the Army and Navy medical schools. A special course of thirteen weeks for student officers has been inaugurated. The quarantine against Cuba, the insular quarantine in the Philippine Islands, and the foreign quarantine and fruit-port inspection service are then described. During the year 935,596 immigrants were inspected by medical officers of the service, of whom 10,902 were certified. Special attention is invited in the report to the sanitarium at Fort Stanton, N. M., for the reception of tuberculosis patients of the service, the leprosy station at Molokai, Hawaiian Islands, and the hygienic laboratory.

FOREIGN

Tuberculosis Dispensaries at Madrid.—Two well-equipped antituberculosis dispensaries have been opened at Madrid and placed in charge of leading physicians, with a numerous staff o. assistants.

The Cornil Monument.—Subscriptions to the amount of 27,000 francs ($5,400) have already been received toward the monument to the late Professor Victor Cornil of Paris. The monument is to be erected at Cusset, his birthplace, and will be a worthy memorial of the well-known surgeon.

The Swedish Medical Association Fund for Spa Treatment.—The *Svenska Läkaresällskapet* has a small fund at its disposal the income of which is given annually to some person of Swedish nationality to enable him or her to have the benefit of a course of treatment at the German watering-place, Aachen, better known as Aix-la-Chappelle.

LONDON LETTER

(From Our Regular Correspondent)

LONDON, April 3, 1909.

Research on Tropical Diseases

The report of the advisory committee of the Tropical Diseases Research Fund for 1908 shows that the revenue for the year amounted to $17,000, which was made up of contributions of $5,000 from the imperial government, $2,500 from the government of India, $1,000 from the Rhodes trustees and $8,500 from various colonies and protectorates. The money was distributed as follows: London School of Tropical Medicine, $6,500; Liverpool School of Tropical Medicine, $5,000; University of London, $3,750; Cambridge University, $500; Australian Institute of Tropical Medicine, $2,000. Of the grant to the Liverpool School half was employed for the appointment of a lecturer in economic entomology and parasitology and of a lecturer in tropical medicine, both of whom are required to devote their spare time to research. The other half of the grant was used in part payment of the expenses of the "sleeping sickness expedition," sent by the school to Rhodesia. Out of the grant to the London School, $5,000 was devoted to the payment of a teacher and investigator of protozoology and of a teacher and investigator of helminthology. The post of director of the Central Research Institute established in Southern Nigeria has been allotted to Dr. W. M. Graham, a medical officer of the Gold Coast colony. It is proposed to found an Australian Institute of Tropical Medicine at Townsville in North Queensland, which is within the area of tropical diseases, and is the first port of call for vessels coming to Australia from the far east. The Queensland government has promised $1,250 a year and the Commonwealth government $2,250 toward defraying the expense. A proposal to despatch a scientific expedition to Papua, which in the committee's opinion offers a great field for important work, has been deferred until the new Australian Institute has been established.

Action for Alleged Infection from a Hospital

An action against hospital authorities has been brought under exceptional circumstances. The plaintiff lived in country district named Alton, in which an outbreak of diphtheria occurred. An isolation hospital was erected adjoining his land. One of his children, a girl aged 7 years, crept under a wire fence and approached the hospital. She also played with a kitten which had lived in the hospital. She contracted diphtheria, and the plaintiff alleged negligence on the part of the hospital authorities. Medical evidence was given to the effect that infection with diphtheria might have been brought about by infected children coughing on the grass where the child played. The judge ruled that there was no evidence of negligence to go to the jury, for the child might have become infected in a thousand different ways.

Workman's Claim for Compensation for Hysterical Paraplegia

As shown in previous letters, the Employers' Liability Act is giving rise to all sorts of unreasonable claims for compensation. The following case has occurred in Dublin: A laborer sued a firm of fertilizer manufacturers for injuries to his spine received while loading fertilizer in barrows. The accident was the result of a heap of fertilizer, 7 or 8 feet high, falling on him. He became unconscious and was treated in a hospital. His physician stated that he was suffering from an injury to the spine which prevented him from working. He moved about the court with the aid of crutches. On the other hand, medical evidence was produced for the defendants to show that the plaintiff had no organic disease of the spine, and that the only reason why he could not walk was that he had the fixed idea in his mind that he was unable to do so. Sir Charles Ball was asked to examine the plaintiff as medical assessor. He agreed with the evidence that there was no organic disease, but he did not think that the man was malingering, but that he was in a nervous and hypochondriacal condition and was not fit for work at present. The judge commented on the enormous advantage of the aid of a medical assessor in these cases. The important question was how far the accident could be held responsible for the man's mental condition as distinguished from physical injuries. He suggested that some agreement should be arrived at between the parties. By consent of both parties he made an interim order for payment of an allowance to the plaintiff and adjourned the case until next session.

Physician Dies from the Bite of a Patient

Mr. A. B. Wilson, house surgeon at the London Hospital, has lost his life under peculiar circumstances and has added one more name to the list of physicians who have died in the discharge of their duty. On March 19 he assisted in the treatment of a woman who had tried to commit suicide by taking laudanum. It was necessary to gag her to pass the stomach tube. As she did not want to live, she struggled violently to prevent the operation. She knocked the gag out of her mouth and seizing Mr. Wilson's hand she bit his thumb. Not much notice was taken of the injury at the time and nothing was done to the wound. On the following day he complained for the first time and he became so ill that he was admitted to the resident ward on April 24. The wound healed but septicemia supervened and he died April 31.

PARIS LETTER

(From Our Regular Correspondent)

PARIS, March 30, 1909.

Election of Dr. Segond to the Academy of Medicine

At the last session of the Academy of Medicine, Dr. Paul Segond, professor of clinical surgery in the Faculty of Medicine and surgeon to the Hospital of the Salpêtrière, was elected, by 63 votes out of 75 voters, as an honorary member of the section on operative medicine, in place of the late Professor Berger.

The Abuse of Disinfection in Paris

At the last meeting of the Medical Society of the Hospitals of Paris, Dr. Comby, physician to the Hospital for Sick

V 19

Children, argued energetically against the compulsory notification of measles and the consequent disinfection. The floors and walls are washed, the furniture is sprinkled with antiseptic solutions, bed linen, etc., is sent to the sterilizer, etc. There is thus caused much annoyance to families as well as prejudice against them without any advantage. It is especially before the eruption and within wide limits—four days for the period of invasion and as much for the eruptive period—that measles is contagious, and the contagiousness lasts altogether eight days. When this period has passed one might sleep with a measles patient in full desquamation without contracting the disease. On the other hand once outside the organism the measles germ rapidly loses its vitality. It can not exist on floors, walls or furniture. Consequently the disinfection is useless. Some twelve years ago the lamented Professor Grancher prevented the Academy of Medicine from including measles in the list of compulsory notifiable diseases, but in 1903 during his absence the partisans of notification returned to the charge and the academy gave way. The result was for the public a real abuse of disinfection. Recently Dr. Courmont, professor of hygiene at the Faculty of Medicine at Lyons, after a study in Scandinavian countries, where measles is declared every month, but without individual notification of cases, demanded that this affection should be removed from the list of compulsory notifiable diseases. Dr. Lemoine, professor at Val-de-Grâce, is no less convinced of the uselessness of disinfection in measles. He goes even further and throws doubt on the value of place disinfection in the other contagious diseases. In Paris, municipal disinfection, which is very costly, has not kept its promises; it has not prevented the contagious diseases from spreading and even multiplying. Never, indeed, has there been so much scarlatina, measles, whooping cough, as during these latter years, and if diphtheria has declined, that is due, not to disinfection, but to the use of antitoxin. Dr. Comby concluded his communication by asking the Academy of Medicine to return to its superceded vote of 1903, and finally to erase measles from the already too long list of compulsory notifiable diseases.

Four Inaugural Addresses

Four new professors have recently taken possession of their chairs at the Faculty of Medicine, viz., Gilbert Ballet, Quénu, Hartmann and Chaufard. The inaugural address of each deserves notice, not only because of its weighty character, but still more because it constitutes a veritable profession of faith. After reviewing the career of his predecessor, Professor Joffroy, Gilbert Ballet criticized severely the bill concerning the insane, voted by the Chamber of Deputies, and intended to replace the law of 1838, which it was alleged, exposed the insane to arbitrary sequestrations. Far from sharing the current opinion, Ballet thinks, on the contrary, that the law of 1838 is one of the best conceived, the wisest, and the most practicable laws possible. If there have been arbitrary sequestrations, that is not because the law of 1838 was badly constructed, but because it was badly applied. The new bill gives, in spite of appearances, infinitely less security to the insane and to his family. It takes us back more than 100 years to the period before Pinel. It would render the situation of unfortunate psychopaths absolutely intolerable, because any access of mental confusion, maniacal excitement, or melancholia would necessitate the intervention of the court to attest by a judicial decision the misfortune which had overtaken them and to which this decision would impress a humiliating significance. It is to be hoped, then, that this bill will be carefully revised by the senate before being definitely adopted.

Professor Quénu devoted his inaugural address to a review of the predominating action of the men who have presided over the extraordinary surgical revolution of the last thirty years. In giving his audience the impressions of a student of 1871, Quénu described the work of Lister and the rôle played in the introduction into France of antisepsis and asepsis by Lucas-Championnière and Terrier, the first the personification of antisepsis, the second of asepsis. Reviewing next the social evolution of surgery, Quénu showed how the public has, little by little, come to believe that the resources of surgery are, so to speak, limitless, and consequently that every failure is necessarily the result of a fault of technic. He who would devote himself to surgery, therefore, must take notice of this change in the social atmosphere. More than ever, moral, scientific, and technical qualities are necessary in the practice of surgery. Moreover, Quénu holds that surgery should be reserved solely to surgeons by profession. He is not in accord with those who consider that every practitioner who has passed the faculty's examination should be able to perform at least emergency operations.

Entirely different is the viewpoint of Professor Hartmann, who, in reviewing, in his inaugural address, the history of the chair of operative medicine and the practical instruction which accompanies it, insisted that every physician should receive an education sufficient to enable him to intervene in emergency cases, especially in districts removed from great centers.

The subject of Professor Chauffard's course was the history of tuberculosis; but the first lesson of this course was devoted to a more general theme, namely, the rôle of discovery in the history of medicine. Chauffard especially insisted that alongside of the great discoverers one must not forget also the promoters, those who sowed the first seed of the discoveries that have later transformed the medical sciences. It has been said that the history of medicine is the history of the errors of medicine; according to Chauffard, it would be more justly termed the history of its efforts.

Dr. Huchard Resigns

Dr. Huchard, physician to the Hôpital Necker, has tendered his resignation as member of the jury for the *concours* for the title of physician to the hospitals, of which he has been named president. This decision has caused a marked impression in the medical world. Not wishing to raise any talk, Dr. Huchard assigned as the cause that he is suffering from grippe; but in reality his purpose is a protest against the injustice and favoritism that prevail in the *concours*, and which he considers a necessary consequence of its mode of organization. The ten members of the jury have to designate ten physicians to the hospitals. Each one of the judges has his candidate, who is his pupil and who is sure to be appointed, even though there may be other candidates more deserving than he, but lacking a "patron" among the jury. It is no longer a *concours* in which merit alone should win, for as soon as the jury has been drawn by ballot, it is well known what candidates will be elected. The natural consequence of this procedure is, that on the fourth of March—that is to say, only a few days after the opening of the *concours*—a political journal published, from the composition of the jury, the names of the ten candidates who would be declared admissible. These ten candidates subsequently obtained in the written examination the maximum marks, namely, 20, while the other candidates obtained lesser marks, 17, 18, etc. It is on account of these facts that Dr. Huchard has resigned.

Congress of Physiotherapy

The second Congress of Physiotherapy of French speaking physicians will meet at Paris from April 13 to 15, 1909, under the presidency of Professor Landouzy, dean of the Faculty of Medicine of Paris. The commission of organization has received numerous acceptances, not only from France, but from Belgium, Switzerland and Canada. Questions to be discussed are: (1) The Dangers of the Exercise of Physiotherapy by Empirics; (2) Physiotherapy in the Treatment of Acne; (3) Physiotherapy in the Treatment of Varices and Varicose Ulcers; (4) Physical Agents in the Diagnosis and Treatment of Infantile Paralysis.

BERLIN LETTER

(From Our Regular Correspondent)

BERLIN, Mar. 25, 1909.

Accident to von Leyden

A short time ago Prof. v. Leyden met with an accident in which he slipped on the street and fractured the neck of the femur. Considering the age of the patient, 77 years, not only is the prognosis as to the uniting of the fractured bone unfavorable, but there is reason to fear an unfavorable influence on his general health from confinement to bed. It is to be hoped that the unusually vigorous constitution of the scientist will stand him in good stead in this case.

Death of Professor v. Renvers

On March 22 our profession suffered a serious loss through the death of Prof. v. Renvers, who succumbed within a few days of the age of 55 to suppurative pyelophlebitis. While not especially noted as a scientist, v. Renvers was well qualified by his good diagnostic insight and his practical treatment, but not less by his marked intuition, his knowledge of men, his confident bearing and his great friendliness to secure quickly the favor of the public, and he won very soon an extensive practice, especially in the most prominent circles of Berlin.

Medical Congresses

The vacation between the winter and summer semesters of the universities is taken as the time for meeting of some of the medical congresses. Some meet annually in the same place, some go to a new place for each session. The German balneologic society has lately held its session. The German surgical society, the society of orthopedic surgery, and the Röntgen-Gesellschaft, meet in April. The congress for internal medicine meets in Wiesbaden and the pathologic society in Leipsic. An enormous amount of scientific material is presented at these meetings and serves to increase considerably the literature regularly published in our journals. For the surgical congress 110 papers have already been announced. I will report the proceedings of the congress for internal medicine in due time.

International Institute for the Study and Prevention of Insanity

At the Second International Congress for the Care of the Insane (Milan, 1906), a Zurich psychiatrist, Franke, proposed the establishment of an international institute for the study and prevention of the causes of mental diseases. An international committee was accordingly formed. The King of Italy became the patron of the proposed institution and at the Third International Congress for the Care of the Insane (Vienna, October, 1908) a plan worked out by Professor Tamburini of Rome was provisionally accepted. Its organization is to be entrusted to a conference of delegates from various nations. The institute is to be located at Zurich. To secure reports on the causes of insanity from various countries and to ascertain the best means for their prevention, an international commission is to be appointed. Various national committees are to cooperate, and finally an international congress is to be founded for the same purpose. The necessary funds are to be obtained by the contributions of members, by bequests and by appropriations by the governments. The governments and those interested in the work of the institute will be kept in touch with its progress by reports in several languages. This is a comprehensive plan, and some skepticism is at present justifiable as to its realization.

VIENNA LETTER

(From Our Regular Correspondent)

VIENNA, March 27, 1909.

The Impending War and the Medical Profession

The political situation on the southeastern frontier of the empire lately became threatening, and the military authorities had to arrange everything for a war. One of the most important branches, and the one which has received careful attention during the last few weeks, is the army medical corps. Only recently it has been admitted by the military circles that the number of surgeons, as well as their rank and influence, was not up to the requirements; but now, the proportion of surgeons to the men of the rank and file has been improved, so that there is one medical man for at least 200 men. In many places and regiments where the probability of conflict is nearer, the proportion is better still. In order to insure the required number of physicians, the practitioners who are in the army reserve have been called to their ranks in many instances. This means a serious interruption in the practice of many young physicians. Those between 28 and 32 years, who are building up a practice or who have just succeeded in doing so, have been hit hardest, although as much consideration has been exercised as was possible. The absence of physicians in country districts and hospitals will be felt keenly if a war should break out actually, as then a large number of medical men would be called up to fill their posts in the army; meanwhile, physicians joining the army of their own accord are paid well, and it is said that members of the Anglo-American Medical Association in Vienna have availed themselves of this opportunity to have extensive surgical practice on the battlefield (I could not ascertain whether this is founded on actual facts). Each company marching down to the presumptive field of action is provided with ample filtering apparatus; a well-equipped and trained staff of chemists and public health officers will accompany the army in order to deal with any problems of public sanitation arising out of the amassing of huge armies in an uncivilized country amid uncultured population. The canned food distributed to the soldiers has been subjected to regular inspection by the medical officers and special care is taken to provide for the men a varying menu with as little alcohol as possible, but with an ample supply of sugar and sweetened food. In another line, the threatening conflict will affect the position of the military surgeons. The old surgeons of the army are now discharged as quickly as substitutes are obtained for them, so that the younger men have a good chance of promotion; fresh blood comes into the somewhat antiquated body of the army medical corps, and the importance of the medical man is well demonstrated to the rank and file. If, as is the hope of hundreds of thousands, war can be warded off, the medical profession, at least, will have regained an ample influence and obtained the position due to it in the army.

Pharmacology

THE "BRACERS"

"Patent Medicines" Whose Sale Requires a Liquor Dealer's Tax

We have referred before to the admirable work done by the President's Homes Commission and the vast amount of data collected by it and published in its report. The report of one of its committees—that on social betterment—by its chairman, Dr. George M. Kober, contains information of more than ordinary interest to the medical profession. In the chapter on the "Alcohol Question," attention is called to the increasingly large number of what have been called "booze medicines" on the market—that is, alcoholic preparations sold under proprietary names as medicinal products. As a matter of fact, the amount of medicinal agents—aside from alcohol—contained in these "bracers," is so small as to be negligible. The Commissioner of Internal Revenue has published lists of these "medicines" which have been analyzed in his department, and found "insufficiently medicated to render them unsuitable for use as a beverage." The druggist is forbidden to sell these "medicines"—classed as "compound liquors" by the Internal Revenue Department—unless he "has already paid special tax as retail liquor dealer." In his report, Dr. Kober gives the names of over 120 of these "patent-medicine" drinks, together with the alcohol percentage as "ascertained from the Commissioner of Internal Revenue in a communication dated Nov. 28, 1908." We give below a partial list of these, omitting those quoted as having less than 20 per cent. of alcohol:

NAME OF PREPARATION	ALCOHOL PER CENT.
Angostura Aromatic Tincture Bitters	45.00
Aromatic Bitters	42.14
Atwood's La Grippe Specific	32.70
Auguaer Kidney Aid	35.65
Auguaer Bitters	34.13
Belvedere Stomach Bitters	29.32
Bismarck Laxative Bitters	21.14
Bismarck's Royal Nerve Tonic	20.67
Blackberry Cordial (Strother Drug Co.)	21.50
Blackberry and Ginger Cordial (Standard Chemical Co.)	25.62
Black Tonic	44.62
Bonekamp Stomach Bitters	20.34
Bonekamp Bitters	37.03
Brown's Aromatic Cordial Bitters	42.14
Brown's Vin Nerva Tonic	27.32
Botanic Bitters	20.44
Cinchona Bitters	27.44
Clifford's Cherry Cure	35.90
Clifford's Peruvian Elixir	24.77
Crescent Star Jamaica Ginger	42.65
Cuban Gingeric	31.09
Dandelion Bitters	30.15
De Witt's Stomach Bitters	23.86
Dr. Brown's Blackberry Cordial	29.04
Dr. Hoffman's Golden Bitters	26.30
Dr. Sterkl's Ohio Bitters	21.67
Dr. Dade's Blackberry Cordial	28.84
Dr. Bouvier's Buchu Gin	39.83
Dr. Fowler's Meat and Malt	33.70
Dr. Worme's Gesundheit Bitters	27.92
Dr. Rattinger's Bitters	27.10
Ducro's Alimentary Elixir	23.01
Elixir Calisaya	22.97
Ferro China Bascal	32.10
Ferro China Bissler	28.87
Gastrophan	26.10
Gentian Bitters	39.95
Gilbert's Rejuvenating Iron and Herb Juice	23.81
Ginger Tonic	25.31
Glycerine Tonic (Elixir Pepsin)	39.72
Green's Chill Tonic	37.88
Jack Pot Laxative Bitter Tonic	24.95
Juni-Kola	22.80
Juniper Kidney Cure	24.21
Karlshader Stomach Bitters	21.56
Katarmo	27.60
K. K. K.	24.12
Kola and Celery Bitters	20.68
Kreuzberger's Stomach Bitters	40.22
Kudros	29.33
Lemon Ginger	28.88
Meta Muita	32.98
Milburn's Kola and Celery Bitters	20.68
Neuropin	32.02
O'Hare's Bitters	44.93
Old Dr. Jacques Stomach Bitters	40.02
Old Dr. Scroggin's Bitters	24.74
Our Ginger Brandy	26.24
Panama Bitters	32.83
Pepsin Stomach Bitters	34.96
Peptonic Stomach Bitters	23.12
Rockandy Cough Cure	23.85
Severa's Stomach Bitters	22.66
Smith's Bitters	34.41
Steinkonig's Stomach Bitters	32.05
Tatra (Latra)	22.90
Tolu Rock and Rye	30.08
True's Magnetic Cordial	28.09
U-Go	32.14
Uncle Josh's Dyspepsia Cure	30.06
Westphalia Stomach Bitters	31.96
William's Kidney Relief	37.00

FALSE CLAIMS FOR MEDICINES

The Awakening of the German Medical Profession to a Serious Abuse

As THE JOURNAL has frequently shown, it is not unusual for the less reputable pharmaceutical houses to put out mere mixtures of well-known drugs under fanciful names as entirely new remedial agents possessing peculiar therapeutic virtues. In an address before the German Pharmaceutical Association, H. Thoms[1] condemned this form of dishonesty and called attention to the disfavor into which the German pharmaceutical industry is likely to fall in foreign countries through such unreliable preparations. He quoted the recent utterances of THE JOURNAL to show the feeling of the medical profession in America regarding the standing of firms which introduce and advertise such preparations.

The indifference of the German medical profession noted by THE JOURNAL is already passing away, and Thoms, referring to the article by E. Harnack,[2] shows that there is an awakening among German physicians and pharmacists who begin to appreciate the extent of the evil.

As at present there is no legal means in Germany of correcting this abuse, Thoms urges the necessity of a law that shall require the actual composition of the preparation to appear on the label; this would work no hardship to the pharmaceutical and chemical interests involved. The law would not involve disputed points as to constitution, but merely the percentage composition of mixture as to its elements. The analyses made under Thoms' direction have shown that the compositions of remedies frequently differ radically from that given on the labels. To illustrate this point the preparations given below are said by Thoms not to fufill the requirements of correct labeling in the particulars given:

ARHOVIN, claimed to be diphenylamin thymylbenzoate, is a mixture of diphenylamin, thymol and ethyl benzoate.

ASPIROPHEN is not a single substance as advertised, but a mixture of about 63 parts of monoacetylphenocoll and 37 parts of free salicylic acid.

CITROCOLL is a mixture containing phenocoll monocitrate.

EPILEPTOL is claimed to be condensed amidoformic acid, while in reality it is a mixture of formamid with a combination of formaldehyd with formamid containing a small quantity of hexamethylenamin.

ESTON, SUBESTON and FOMESTON contain aluminum sulphate, which is prejudicial to the best effect of the preparation.

FORMUROL is a mixture of hexamethylenamin and sodium, neutral and acid citrate.

IODOFAN contains far less iodin than should be present according to the formula.

IOD-VASOGEN contains no free iodin.

KEPHALDOL, while said to be a compound made under special conditions, analyses showed it to be a mere mixture of phenacetin, sodium salicylate and quinin.

NEW SIDONAL, said to be an inner anhydrid of quinic acid, showed 25 per cent. of free quinic acid.

PHAGOCYTIN, said to be a solution of pure nucleinate of sodium, showed the presence of about 5 per cent. of arsenic in organic combination.

PYRENOL, advertised as a chemical compound, and furnished with an impossible formula, was shown to be a mere mechanical mixture. According to its formula its analysis should show the equivalent of 29 per cent. of thymol and 10 per cent. of ash, when in fact it shows only 0.2 to 0.3 per cent. of thymol and 34-35 per cent. of ash.

In reviewing the proposals for the establishment of a central institution for testing secret and new remedies, Thoms insists that only a public official institute is really competent to assume the responsibility involved in such tests. He states that it should be under the control of the imperial government and not confined to any one state. If this were done and a law passed requiring the correct labeling of medicines, many of the evils connected with the manufacture and promotion of medicines might be reduced or entirely removed.

1. Therap. Monatsh., December, 1908.
2. Deutsch. med. Wchnschr., 1908, xxxvi.

An Eighteenth Century Protest Against Twentieth Century Conditions

As a protest against the polypharmacy of his time and as foreshadowing the opinions of some who were to live more than a century later, the quotation that follows is of interest. It was written in 1774 by William Rowley, an English physician of eminence, who after distinguished service in the army, settled in London, where he acquired an extensive practice:

"On the effects of simple medicines we may form just inferences, but in compounds there is such confusion of substances, that we can not ascertain which relieved the disease, and consequently our conclusions may be erroneous. . . .

"If there was a possibility of reducing the materia medica to about twenty remedies, it would greatly improve the science of medicine. We should soon arrive at certainty on the effects of remedies in every disease. But, while there are some hundreds of insignificant substances constantly used on very precarious principles, and substances diametrically opposite enter the prescriptions of the learned, it is impossible to improve this noble art. The necessity of a reformation in this particular is evident: it might be accomplished by a few men of learning and spirit, of liberal and exalted sentiments."

Correspondence

Bismuth Poisoning

To the Editor:—With reference to the cases of bismuth poisoning reported by Drs. V. C. David and J. R. Kauffman in THE JOURNAL, March 27, I desire to report a personal experience which in the future may help to prevent a fatal termination, as happened in their Case 2.

In 1904 I operated on a boy aged 10, for a suppurative appendicitis. A small sinus (drainage tract) which never healed was injected by me in March, 1908, with Beck's 33 per cent. bismuth paste. The entire two ounces entered the sinus which terminated in some perineal pocket. Five days later, the stomatitis and the constant pain at the site of injection caused me to reopen the wound and remove the paste, when the symptoms promptly ceased. Later, the sinus was again repeatedly injected with half-ounce doses with resulting healing at the sinus.

In the report by Drs. David and Kauffman it is difficult to determine to what extent the operations performed in Case 1 December 7 and 13 with removal of some of the paste at each operation, prevented a similar termination in Case 2. Since the patient manifested cerebral symptoms as late as December 21, it would appear that the quantities removed helped materially in rendering the intoxication less severe.

In Case 2, 6 ounces were injected, a rather large initial dose, Beck recommends beginning 3 ounces (*Ill. Med. Jour.*, July, 1908).

In view of the facts that the clinical course lasted 27 days che symptoms increasing in severity till the end; that the patient's condition progressively grew worse, the skiagraph showing the paste in the joint; and, finally, knowing that bismuth is slowly absorbed, as demonstrated by Beck, often remaining in cavities for weeks, would the poisoning not have been arrested as in my case by opening the sinus and the joint freely and removing the paste as much as possible? This could have been done with Schleick's local anesthesia.

In conclusion: In cavities and joint opening on the body surface by long tortuous sinus or sinuses, the initial injection should be of a small quantity till the tolerance is assured. Should the symptoms of bismuth poisoning arise, the early removal of the paste in indicated.

VICTOR J. BACCUS, M.D., Chicago.

This letter was submitted to the authors of the article mentioned and Dr. David makes the following reply:

In our article in THE JOURNAL, March 27, we stated that it was but a preliminary report, to be followed by another giving more detailed treatment of the two patients.

Dr. Baccus refers to cerebral symptoms in Case 1. In a case of years' standing as this one was, having institutional care, and exhibiting mental symptoms, it may be doubted whether the bismuth or other factors were responsible.

In regard to Case 2, the question of operation was discussed several times in consultation with several members of the staff and was deemed inadvisable because of the patient's poor condition; because a considerable amount of the paste had been previously removed by irrigation, etc.; because it was considered of doubtful value to open up a hip joint in presence of a secondary infection; and lastly, because the bismuth was shown by the skiagraph to connect with the diseased head of the femur and not to lie in the capsule of the hip.

Dr. Kauffman and I expect to read a report of these cases, with treatment, etc., before the surgical section of the Illinois State Medical Society at Quincy.

In conclusion I think Dr. Baccus is right in saying that early evacuation is indicated in cases in which the operation would be less harmful than the poisoning.

International Medical Congress

To the Editor:—I have received a letter from the secretary-general of the International Medical Congress to be held at Budapest, Aug. 29 to Sept. 4, 1909, an abstract of which I add: "Authors of communications have until May 15 to send in their papers. If not able to prepare their papers by that date they may present them at the time of the congress, with the difference that such communications will be published in the second volume of the Congress Reports."

J. H. MUSSER, Philadelphia.

Queries and Minor Notes

ANONYMOUS COMMUNICATIONS will not be noticed. Queries for this column must be accompanied by the writer's name and address, but the request of the writer not to publish name or address will be faithfully observed.

KARLINSKI'S NASAL SECRETION BACILLUS

To the Editor:—Kindly publish a description of the morphology, characteristics, identification, staining, etc., of Karlinski's nasal secretion bacillus. A SUBSCRIBER.

ANSWER.—This question apparently refers to an acid-proof bacillus found by Karlinski in the nasal secretion of a 43-year-old Mohammedan and described in *Centralbl. f. Bakt.*, 1901, 29, p. 521. The organism is a short, rather plump, bacillus with pointed ends. In stained preparations of the secretion it appeared in groups of two or three cells, sometimes more. It was different from the bacilli of tuberculosis and leprosy in being of greater diameter. Karlinski succeeded in cultivating the bacillus on various glycerin-agar media, on which it developed grayish-yellow colonies; the growth was more rapid and luxuriant on media of slightly acid than on those of alkaline reaction. Development took place slowly, and after three weeks the colonies had reached a diameter of only 2 mm. The color of the growth changed gradually to orange-red and then to copper-red, the consistency of the growth was distinctly slimy. Alkaline meat broth was quickly clouded, no pellicle was formed, but a yellowish sediment was produced. All cultures emitted a distinct sweetish odor. On potato, a slimy, gray, tenacious film was formed. Although the temperature optimum was 37 C., growth occurred also at ordinary room temperature and even, although very slowly, on ordinary nutrient gelatin. Growth occurred in milk, but the reaction of this medium was not altered. The bacillus did not prove pathogenic for mice or rabbits, but killed guinea-pigs in from four to eight weeks when a broth culture was injected intraperitoneally. Nodules were produced, but giant cells were entirely lacking. Branched and swollen forms were never observed. When treated with acid or acid-alcohol, stained preparations of this organism resisted decoloration even more tenaciously than the tubercle bacillus. Karlinski holds that the morphologic, tinctorial and cultural characters above set forth differentiate without question this bacillus from the tubercle bacillus, the leprosy bacillus and other previously described forms, but nevertheless he does not assign to it any pathogenic significance, and believes that its main importance lies in the possibility of its being mistaken for other bacteria, such as the leprosy bacillus, found in the nasal secretions.

WAR MORTALITY OF JAPANESE

To the Editor:—Kindly give the statistics of deaths in the Japanese army (a) from wounds, (b) from typhoid, (c) from diarrheal diseases, during the recent Russo-Japanese war.

L. B. MCBRAYER, Asheville, N. C.

ANSWER.—The exact information asked for is not available. The following statistics, however, are quoted from the report of Major Charles Lynch, U. S. Army, who was attached to the armies in Manchuria as a military observer for the United States:

JAPANESE CASUALTIES DURING THE RUSSO-JAPANESE WAR

Official Japanese statement to include the entire war.

Killed in battle	47,387	
Died of wounds	11,500	
Wounded, but recovered	161,925	
Total killed and wounded		220,812
Died of sickness	27,158	
Sick, but recovered	209,065	
Total sick		236,223
Total of killed, wounded and sick		457,035
Total of fatal casualties		85,945

These figures relate to the field only, not including cases among the troops in Japan or Formosa, and they may be slightly altered when all the reports of hospitals are compiled. Of those who succumbed to disease nearly three-fourths died in the field and one-fourth after reaching home. To find the total number of killed in battle and patients treated the following additions must be made:

Total of killed, wounded and sick in the field	457,035
Patients treated at home	97,850
Russian prisoner patients	77,803
Grand total	632,688

The above figures do not include slight cases remaining with the Japanese regiments. In April, 1906, when these figures were published, the Japanese missing had been reduced to 3,000. In the Chinese-Japanese war cases of contagious diseases comprised 14 per cent. of the total number of patients, while in the recent war such cases occurred in but 3.7 per cent. of patients. In the former war 4.21 per cent. of all sickness resulted from frostbite, and in the latter 0.35 per cent. The improvement noted in the Russo-Japanese war in beriberi was not great, however. In peace only 0.44 per cent. of the army is afflicted with this disease; in the Chinese-Japanese war 18 per cent. suffered from it, and in the Russo-Japanese war 16 per cent.

REPORT OF THE PRESIDENT'S HOMES COMMISSION

To the Editor:—The references in THE JOURNAL to the interesting matter contained in the Reports of the President's Homes Commission, make me anxious to get a copy. As I have failed to secure one by applying to my congressman, I am anxious to know whether there is any other source through which this valuable work may be obtained. C. P.

ANSWER.—We understand that, while the regular edition of the commission's report has been exhausted, a limited number of copies are at the disposal of the President's Homes Commission, which may be addressed at 923 H street, Washington, D. C. These books, we believe, will be distributed as long as they last.

FATAL BURN ON EVE OF DEATH FROM APPENDICITIS—AN ACCIDENT INSURANCE CASE

To the Editor:—The letter from Dr. Robert T. Morris in THE JOURNAL March 13 recalls an interesting case that occurred in my practice a number of years ago.

A man, aged about 50, with feeble digestion and far advanced in Bright's disease, developed recurrent appendicitis. I was advised not to operate, as the risks were too great. One evening I was called by the attending physician, who reported a typical case of acute appendicular perforation with shock. I hurried to the home of the patient, full of anxiety as to what might be surgically right and proper under the circumstances, only to find that in the meantime he had been fatally burned by the accidental explosion of a spirit lamp, which he had been in the habit of using to induce perspiration. On learning the facts I reported the case to the coroner. The victim of the accident carried $15,000 accident insurance and only $2,000 regular life policies.

While death in any event was only a few hours distant, there can be no question that he died by an accident, for which the insurance companies were responsible. The facts have not heretofore been reported. C. R.

The Public Service

Army Changes

Memorandum of changes of stations and duties of medical officers, U. S. Army, week ended April 10, 1909:

McCulloch, C. C., Jr., major, relieved from duty with the Isthmian Canal Commission, and ordered to duty in the Philippine Islands.

Ashburn, P. M., major, assigned to temporary duty in the office of the Surgeon-General.

Gilchrist, H. L., major, granted an extension of 10 days to his leave of absence.

Hoff, J. V. R., col., ordered to Forts Wayne, Mich.; Thomas, Ky., and Benjamin Harrison, Ind., on business pertaining to the Medical Department.

Carter, E. C., lieut.-col., granted leave of absence for 15 days.

Heysinger, J. D., capt., granted leave of absence for 21 days.

McAndrew, P. H., capt., granted leave of absence for two months.

Murray, Alexander, capt., ordered to San Francisco, Cal., to sail May 5, for Philippine service.

Reno, W. W., capt., relieved from duty in the Philippines Division and assigned to duty as surgeon of the transport *Kilpatrick* on its next voyage to the United States.

Richards, R. L., capt., granted leave of absence for 10 days.

Nichols, H. J., 1st lieut., relief from duty in the Philippines Division deferred for three months.

Stockard, J. K., M. R. C., honorably discharged from the service, his services being no longer required.

Cutliffe, W. O., M. R. C., granted leave of absence for two months.

Navy Changes

Changes in the Medical Corps, U. S. Navy, for the week ended April 10, 1909:

Pickrell, G., surgeon, detached from the Bureau of Medicine and Surgery, Navy Department, and ordered to duty in connection with the fitting out of the *Solace*.

Wheeler, L. H., P. A. surgeon, detached from duty at the Naval Training Station, Narragansett Bay, R. I., and ordered to instruction at the Naval Medical School, Washington, D. C.

Foster, T. G., asst.-surgeon, detached from duty at the Naval Hospital, Narragansett Bay, R. I., and ordered to instruction at the Naval Medical School, Washington, D. C.

Olson, G. M., asst.-surgeon, detached from the Naval Recruiting Station, Pittsburg, Pa., and ordered to instruction at the Naval Medical School, Washington, D. C.

Riker, G. A., acting asst.-surgeon, detached from instruction at the Naval Medical School, Washington, D. C., and ordered to the *Franklin*.

Ziegler, J. G., acting asst.-surgeon, detached from instruction at the Naval Medical School, Washington, D. C., and ordered to duty at the Naval Hospital, Pensacola, Fla.

Harlan, T., acting asst.-surgeon, detached from instruction at the Naval Medical School, Washington, D. C., and ordered to the Naval Recruiting Station, Pittsburg, Pa.

Clark, G. F., acting asst.-surgeon, detached from instruction at the Naval Medical School, Washington, D. C., and ordered to the Naval Hospital, Narragansett Bay, R. I.

Taylor, J. S., surgeon, detached from the Naval Hospital, New York, N. Y., and ordered to the *New York* when commissioned.

Smith, C. W., asst.-surgeon, detached from duty at the Naval Hospital, Philadelphia, and ordered to the Naval Hospital, Norfolk, Va.

Strite, C. E., asst.-surgeon, detached from the Naval Hospital, Norfolk, Va., and ordered to instruction at the Naval Medical School, Washington, D. C.

Phelps, J. R., asst.-surgeon, detached from the *Yankton* and ordered to the *New York* when commissioned.

Cole, H. W., asst.-surgeon, detached from the Navy Yard, Charleston, S. C., and ordered to the *Yankton*.

Kerr, W. M., acting asst.-surgeon, detached from instruction at the Naval Medical Schol, Washington, D. C., and ordered to the Naval Training Station, Narragansett Bay, R. I.

Public Health and Marine-Hospital Service

List of changes of stations and duties of commissioned and other officers of the Public Health and Marine-Hospital Service for the seven days ended April 7, 1909.

Brooks, S. D., surgeon, granted 2 days' leave of absence en route to station

Moore, Dunlop, P. A. surgeon, granted 30 days' leave of absence from April 3, 1909.

Salmon, Thomas W., P. A. surgeon, granted 2 days' leave of absence from March 8, 1909.

Herring, R. A., asst.-surgeon, granted 1 day's leave of absence in March, 1909, under paragraph 191, Service Regulations.

Fogarty, J. N., acting asst.-surgeon, granted 2 days' leave of absence from March 26, 1909.

Foster, S. B., acting asst.-surgeon, granted 7 days' leave of absence from April 19, 1909.

Grace, John J., acting asst.-surgeon, granted 2 months and 21 days' extension of leave of absence, without pay, from April 10, 1909.

Hough, J. S., acting asst.-surgeon, granted 30 days' extension of annual leave on account of sickness from Feb. 1, 1909.

Hough, J. S., acting asst.-surgeon, granted 30 days, leave of absence from March 3, 1909, and 4 months' leave of absence, without pay, from April 3, 1909.

MacCaffey, W. B., acting asst.-surgeon, granted 1 day's leave of absence in March, 1909, under paragraph 191, Service Regulations.

Smith, W. S., acting asst.-surgeon, granted an indefinite leave of absence without pay.

Wetmore, W. O., acting asst.-surgeon, granted 1 day's leave of absence, March 17, 1909.

Wetmore, W. O., acting asst.-surgeon, granted 7 days' leave of absence from March 22, 1909, under paragraph 210, Service Regulations.

BOARDS CONVENED

Boards of medical officers were convened to meet on April 5, 1909, for the purpose of making physical examination of applicants for the position of cadet in the Revenue-Cutter Service, as follows:

Milwaukee, Wis.: Surgeon J. O. Cobb, chairman; Acting Asst.-Surgeon W. E. Fox, recorder.

Wilmington, N. C.: Acting Asst.-Surgeon Thomas M. Green, chairman; Acting Asst.-Surgeon W. D. MacMillen, recorder.

Boards of medical officers convened to meet on April 15, 1909, for the purpose of making physical examinations of officers of the Revenue-Cutter Service for promotion, as follows:

New York, N. Y.: P. A. Surgeon C. W. Vogal, chairman; Asst.-Surgeon F. A. Ashford, recorder.

Norfolk, Va.: Surgeon C. P. Wertenbaker, chairman; Acting Asst.-Surgeon R. W. Browne, recorder.

Newbern, N. C.: Acting Asst.-Surgeon F. Duffy, chairman; Acting Asst.-Surgeon P. del V. Attiles, recorder.

Jan Juan, P. R.: P. A. Surgeon S. B. Grubbs, chairman; Acting Asst.-Surgeon P. del V. Attiles, recorder.

Boston, Mass.: Surgeon L. L. Williams, chairman; P. A. Surgeon T. W. Salmon, recorder

Port Townsend, Wash.: Surgeon W. G. Stimpson, chairman; Acting Asst.-Surgeon L. T. Seavey, recorder.

Health Reports

The following cases of smallpox, yellow fever, cholera and plague have been reported to the Surgeon-General, Public Health and Marine-Hospital Service, during the week ended April 9, 1909:

SMALLPOX—UNITED STATES

California: Oakland, Jan. 7-31, 2 cases; Feb. 1-March 21, 3 cases; San Francisco, March 13-20, 1 case.

District of Columbia: Washington, March 20-27, 1 case.

Illinois: Danville, March 21-28, 7 cases; Springfield, March 19-26, 3 cases.

Indiana: LaFayette, March 22-29, 2 cases; South Bend, March 20-27, 1 case.

Kansas: Kansas City, March 20-27, 4 cases.

Kentucky: Covington, March 20-27, 5 cases; Lexington, 3 cases; Paducah, 1 case.

Michigan: Detroit, March 20-27, 1 case; Saginaw, March 13-27, 3 cases.

Missouri: Kansas City, March 20-27, 2 cases; St. Louis, March 20-27, 2 cases.

Montana: Butte, March 16-23, 3 cases.

Nebraska: South Omaha, March 20-27, 1 case.

New Jersey: New Brunswick, March 20-27, 2 cases.

Ohio: Cleveland, March 19-26, 1 case.

Tennessee: Fayette County, Dec.1-March 2, 200 cases; Memphis, Feb. 20-March 27, 53 cases; Nashville, March 20-27, 1 case.

Texas: Houston, March 20-27, 4 cases; Galveston, March 19-26, 1 case; San Antonio, March 20-27, 2 cases.

Washington: Bellingham, Jan. 20-March 20, 3 cases; Spokane, March 13-20, 1 case.

Wisconsin: La Crosse, March 20-27, 3 cases; Racine, March 20-27, 5 cases.

SMALLPOX—INSULAR

Philippine Islands: Manila, Feb. 6-20, 7 cases, 1 death.

SMALLPOX—FOREIGN

Arabia: Aden, Feb. 14-22, 1 death.

Brazil: Rio de Janeiro, Feb. 14-28, 33 cases, 22 deaths.

Canada: Halifax, March 13-20, 6 cases.

France: Paris, Jan. 23-30, 6 cases.

Great Britain: Bristol, March 6-13, 2 cases.

India: Bombay, Feb. 23-March 2, 16 deaths; Calcutta, Feb. 13-20, 146 deaths; Madras, Feb. 20-26, 4 deaths; Rangoon, Feb. 13-20, 3 deaths.

Italy: General, March 7-14, 5 cases; Naples, March 6-13, 26 cases, 6 deaths.

Japan: Kobe, Feb. 27-March 6, 1 case, 1 death.

Martinique: Fort de France, Feb. 27-March 6, 2 cases.

Mexico: Mexico City, Feb. 6-27, 54 deaths; Monterey, March 14-21, 3 deaths; Veracruz, March 6-20, 4 cases.

Netherlands: Rotterdam, March 6-13, 1 case.

Southeast Africa: Lourenco Marquez, Jan. 1-31, 1 death.

Spain: Barcelona, Feb. 14-March 7, 12 deaths; Valencia, Feb. 27-March 12, 9 cases; Vigo, March 6-13, 1 death.

Straits Settlements: Singapore, Jan. 23-Feb. 13, 4 deaths.

Turkey: Bassorah, Feb. 27-March 6, present; Constantinople, Feb. 28-March 14, 6 deaths.

YELLOW FEVER

Barbadoes: March 6-27, 10 cases, 3 deaths.

Brazil: Manaos, Feb. 20-27, 1 death; Para, Feb. 27-March 6, 3 deaths.

CHOLERA—INSULAR

Philippine Islands: Provinces, Feb. 6-20, 271 cases, 178 deaths.

India: Calcutta, Feb.13-20, 28 deaths; Madras, Feb. 20-26, 1 death; Rangoon, Feb. 13-20, 8 deaths.

Russia: Jarenlov, March 13, 7 cases; Rubinsk, March 13-20, 7 cases; St. Petersburg, March 12-19, 41 cases, 7 deaths.

Brazil: Rio de Janeiro, Feb. 13-28, 4 cases, 1 death.

Chile: Antofagasta, Feb. 28, 15 cases; Arica, March 9, present; Iquique, March 7-14, 32 cases in lazaretto.

Egypt: General, March 11-18, 5 cases, 5 deaths.

German East Africa: Dar es Salaam, Oct. 10-Jan. 7, 7 cases, 5 deaths.

India: General, Feb. 6-13, 3,803 cases, 3,162 deaths; Bombay, Feb. 24-March 2, 153 deaths; Calcutta, Feb. 13-20, 28 deaths; Rangoon, Feb. 13-20, 16 deaths.

Japan: Kobe, Feb. 20-March 6, 2 cases, 1 death.

Peru: General, Feb. 28-March 13, 65 cases, 33 deaths; Callao, March 1-14, 2 cases; Lima department, March 1-14, 13 cases, 3 deaths.

Society Proceedings

COMING MEETINGS

AMERICAN MEDICAL ASSOCIATION, ATLANTIC CITY, JUNE 8-11.

Alabama, Medical Assn. of State of, Birmingham, April 20-23.
American Gynecological Society, New York, May 27-29.
American Neurological Association, New York, May 27-29.
American Pediatric Society, Lenox, Mass., May 27-28.
American Therapeutic Society, New Haven, Conn., May 6-8.
Association of American Physicians, Washington, D. C., May 11-12.
Arizona, Medical Association of, Prescott, May 19-20.
Arkansas, Medical Society of, Pine Bluff, May 18-21.
California, Medical Soc. of State of, San Jose, April 20.
Connecticut State Medical Society, Hartford, May 26-27.
District of Columbia, Medical Assn. of, Washington, April 27.
Georgia, Medical Association of, Macon, April 21.
Illinois, State Medical Society, Quincy, May 18-20.
Iowa, State Medical Society, Dubuque, May 19-21.
Kansas, State Medical Society, Emporia, May 5-7.
Louisiana, State Medical Society, New Orleans, May 4-6.
Maryland, Med. and Chir. Faculty of, Baltimore, May 13-15.
Missouri, State Medical Association, Jefferson City, May 18-20.
Montana, State Medical Association, Missoula, May 12-13.
Nebraska, State Medical Association, Omaha, May 4-6.
New Hampshire, Medical Society, Concord, May 13-14.
North Dakota, State Medical Association, Fargo, May 11-12.
Ohio, State Medical Association, Cincinnati, May 5-7.
South Carolina Medical Association, Summerville, April 21.
Texas State Medical Association, Galveston, May 11-13.

AMERICAN ASSOCIATION OF PATHOLOGISTS AND BACTERIOLOGISTS

Ninth Annual Meeting, held in Boston, April 9-10, 1909

The President, DR. HAROLD C. ERNST, Boston, in the Chair

Gross Blastomycotic Lesions of Bones and Brain

DR. E. R. LE COUNT, Chicago: Two years ago but eleven cases had been reported; now I know of thirty-three cases. This increase of 200 per cent. in two years is largely due to greater frequency of recognition by clinicians. The affection is mainly characterized by cutaneous lesions, but involvement of bone is important. The vertebræ are most frequently attacked, bones of the wrist and the ankle being next in order. Statements as to the site of lesions must be modified, however, by the fact that no instance of the complete examination of the skeleton of any one subject is on record. One type of brain involvement is in the form of minute nodules resembling tubercles, and it is possible that further resemblances to tuberculosis may be shown. Cultures of the blastomyces from the bones and other systemic lesions differ in no essential way from those of skin lesions.

Histology of the Sweat Glands in Chronic Nephritis

DR. HERBERT U. WILLIAMS, Buffalo: This study was undertaken because from the earliest ages faith has been placed in the efficacy of active skin excretion in cases of nephritis and because the excretion, even of urea by the sweat glands, has been described. Specimens from seventy cases of various types of chronic nephritis were examined, skin from the sole of the foot being examined as a routine measure with the addition, in half of the cases, of skin from the anterior abdominal wall. Alcohol fixation, paraffin embedding and hematoxylin-eosin staining gave the most satisfactory results. Various conditions were found, including desquamation of epithelium, cystic dilatation of tubules, moderate dilatation of ducts, atrophy of tubules and the presence in tubules of material resembling casts as found in the kidney. Thrombosis of arteries and veins and arteriosclerosis of the arteries of the skin were also present, the latter condition in fourteen cases. A condition that may be of importance was the apparent formation of two or three layers of cells in the tubules, or at least an increased number of cells if not in regular layers. The actual condition was difficult to determine, but the impression obtained is that the process is an actual multiplication of cells which does not, however, prove that there is a functional hypertrophy of the glands.

Chronic Inflammatory Enlargement of the Lymphatic Glands

DRS. C. W. DUVAL and C. P. HOWARD, New Orleans: The patient was a woman who had rheumatism for six months before the cervical glands began to enlarge. This enlargement became general, the spleen also being slightly increased in size. Tuberculin reaction was negative. There was secondary anemia with moderate leucocytosis, at first a lymphocytosis, later a polynucleosis. Removed glands showed the histology of Hodgkin's disease as described by Reed and Longcope. Nine months after the beginning of glandular enlargement, the patient died. Autopsy showed no evidence of tuberculosis. The spleen was still enlarged, microscopically showing chronic splenitis. The glands histologically showed four stages in the process: 1. A great number of mononuclear endothelioid and mononuclear giant cells, plasma cells and eosinophiles. The lymphadenoid hyperplasia described by Reed and Longcope was lacking. 2. Multinuclear giant cells were prominent. 3. There were a few multinuclear cells and fibrous tissue was increased. 4. There was almost complete replacement of gland by fibrous tissue. Bacteriologically, cultures from glands and inoculations into guinea-pigs were negative and sections of tissue contained no bacteria. The diagnosis, according to the common naming, was Hodgkin's disease, with neither tuberculosis nor lues as a possible etiologic factor. The histology indicated a chronic inflammatory process. A better term than Hodgkin's disease, which should be excluded because of its giving rise to controversy, is granuloma, or, as the cause is unknown, cryptogenic granuloma. The histology justifies regarding this as a distinct disease.

An Unusual Form of Amebic Dysentery

DR. HARRY T. MARSHALL, Charlottesville, Va.: The specimen shown was obtained from a male Filipino who died from intestinal hemorrhage after being ill but ten days or two weeks. The whole colon is studded with nodules up to 12 or 15 mm. in diameter, the tops of some being necrotic. Microscopically, the mucosa over the nodules is lost and fibrin and leucocytes extend into the submucosa. The nodules contain many amebas, but no bacteria. I have found no other specimen of this type, even in museums, and but few writers mention such a condition. I regard it as an early case which lacks the extensive necrosis and ulcer formation so commonly seen.

DISCUSSION

DR. W. T. COUNCILMAN, Boston: This appears to have been a typical case except as to its acuteness, which makes it specially interesting. The possibilities are that it was caused by amebas with unusual powers of multiplication or occurred in a person with but little resistance.

Reinoculation and Metastasis in a Rat Cancer

DRS. SIMON FLEXNER and J. W. JOBLING, New York: The tumor was not a rapidly growing one and reinoculations were not exceedingly difficult. A table giving the summary of inoculations in numerous rats, grouped in thirty-day periods, showed but little difference between reinoculations in those with metastases and in those lacking the secondary growths. In some features the results are contrary to those obtained by Ehrlich.

DISCUSSION

DR. F. P. GAY, Boston: Results in inoculation experiments must vary from time to time, as both the animals and the tumors vary. The individuals in one series can be compared much better than can those of separate experiments.

Functional Hyperplasia of the Mammæ Associated with Syncytioma Malignum of the Testicle

DR. A. S. WARTHIN, Ann Arbor: The subject was a man of 34, father of two children, with no evidence of mixed sexual characters. Following a blow, a tumor the size of a goose egg developed in one testicle. At the same time the breasts enlarged, appearing like those of a woman in early pregnancy. One was removed under the supposition that a new growth was present. After the testicle was removed the remaining breast diminished in size, but later enlarged again as tumor metastases developed. The man finally died. The tumor of the testicle was typical, with its Langhan's cells and masses of syncytium. Autopsy showed metastases in kidney, liver, lungs, brain, stomach and intestine, the immediate cause of death being hemorrhage from the ulcerated tumors in

the alimentary tract. In addition, in front of the aorta, between the kidneys, there was a tumor of the cystadenoma type found commonly in the ovary; this contained also some dermoid elements, but no syncytium. The breast removed at operation showed active growth of connective tissue, but no new acini; in some acini cells there was evidence of fat formation. The breast obtained at autopsy showed attempted acinic formation and fatty content of cells. Neither showed a complete functional condition, but there was evidently attempted function. Careful dissection of the sexual tract showed a hypospadias as the only anomaly. The question is, Was the case one of hermaphroditism?

DISCUSSION

DR. S. P. BEEBE, New York, asked Dr. Warthin why he associated the mammary hyperplasia with the tumor of the testicle instead of with the abdominal tumor which resembled those commonly found in the ovary.

DR. JAMES EWING, New York: A year ago I reported a complex tumor of the testicle, which, with those of other writers, I regard as teratomatous. In my case there was hyperplasia of the interstitial cells of the testicle, though this is not an essential feature. These tumors suggest the possibility of an ovatestis in man as well as in animals.

DR. A. S. WARTHIN: Coincidence of growth of mammæ and testicular tumor, then subsidence in the remaining breast after removal of the testicle, and a second hyperplasia during metastases, led me to associate the two. All the curious tumors of the testicle are teratoid. The best explanation regarding my case is that it was hermaphroditism with an ovatestis.

(To be continued)

PHILADELPHIA COUNTY MEDICAL SOCIETY

Regular Meeting, held Mar. 10, 1909

The president, DR. FREDERICK P. HENRY, in the Chair

Results Obtained by the Subcutaneous Injection of Sea Water

DR. THEODORE LE BOUTELLIER: The therapeutic use of sea water was suggested by the theory of the marine origin of life. This has been studied in France by many investigators, especially Quinton, who by experiments and chemical analysis found sea water solution to be almost identical with blood serum. Injected into the body, it acts as a tonic to the cells and assists in their resistance to bacterial infection; experiments have proved that it is superior to physiologic salt solution. Sea water obtained well out at sea and about forty feet below the surface is diluted with pure water one hundred and ninety parts to eighty-three parts sea water. This is filtered through a Berkfeldt filter, injected subcutaneously under the skin beneath the shoulder or hip in doses of from 10 to 100 c.c., according to age. The effects noticed were increase in appetite, improvement in digestion, the cure of insomnia, gain in weight, and marked improvement in the condition of the skin. The conditions treated included tuberculosis, pneumonia, nutritional diseases of infancy and childhood, chorea and eczema.

DR. R. MAX GOEPP: The work of Quinton on the marine origin of animal life, is said to have suggested the use of sea water for therapeutic purposes to the originator of the method, Dr. Robert Simon, of Paris. The dearth of experimental work on the comparative action of isotonic sea water and physiologic salt solution makes it difficult to arrive at any conclusion in regard to the rationale of the treatment. The dosage has not been determined. Working with adults, I have administered from 3 to 6 ounces three times a week, and in some cases as much as 10 and 12 ounces. In the 11 cases here reported, the patients were selected for the treatment on account of some nutritional disturbance, underweight, obesity (diabetic), constipation, diarrhea or other symptoms referable to the digestive system, or on account of a skin affection. The treatment was given for periods varying from 3 to 12 weeks. The results were inconclusive. No change in body weight (except a loss in the case of one patient who was under weight) or any other objective symptom was noted, one case of lupus erythematosus being excepted in which some improvement was brought about by the treatment. I conclude that for the present the effects obtained all have reference to the patients' suggestive sensations, and can without difficulty be attributed to the suggestive action of a new and unusual therapeutic procedure.

Therapeutic Value of Physiologic Salt Solution

DR. HORATIO C. WOOD, JR.: In cases of circulatory weakness due to hemorrhage or shock or other vasomotor conditions the injection of salt solution is a valuable mode of treatment. When, however, the trouble is due to heart failure the increase in the quantity of fluid means an added strain on the heart and is therefore contraindicated. The use of saline infusion in cases of toxemia with the idea of increasing the rapidity of elimination is founded on an erroneous conception. When a poison is introduced into the system it unites to form new compounds with the cell protoplasm and this molecular union must be broken up before the poison can be eliminated. Salt solution is unable to do this. Experimental studies on the lower animals have demonstrated that salt solution has no specific action in either bacterial or vegetable poisonings. It has, however, a field of usefulness for the relief of certain symptoms, as circulatory failure, occurring in the course of some cases of infectious fevers.

Discussion on Use of Sea Water

DR. THOMAS S. GITHENS: If it be true that diluted sea water, when injected, has an effect different from that of normal saline solution, it is probable that this difference depends on the substances other than sodium chlorid which it contains. Sea water contains varying amounts of magnesium, calcium and potassium salts, each of which has a profound influence on the function and nutrition of the tissues. It has been found, for instance, that the isolated heart of the turtle will beat for only a short time in normal salt solution, but if placed in such a solution to which minute amounts of calcium and potassium salts have been added, it may continue to beat for several days. In some experiments in this direction which I am performing, I have found that very minute alterations in the amount of calcium or potassium will prevent the contractions in an active heart or renew them when they have ceased. I would suggest, therefore, that those who are doing this work have their samples analyzed, as some lots of sea water contain five or six times as much calcium and potassium as others, and should compare their results with those obtained by the injection of a solution of these salts in same proportions, and also with the results to be obtained from the injection of Ringer's solution, which is supposed to agree with the salt content of serum, and which contains sodium chlorid 0.8 per cent., calcium chlorid from 0.03 to 0.04 per cent., potassium chlorid 0.024 per cent. This would be very close to some of the analyses of sea water, if diluted to isotonicity. The statement that sea water is less beneficial if boiled certainly requires confirmation.

DR. JAY F. SCHAMBERG: When Dr. Robert Simon was in Philadelphia I saw a number of photographs illustrating a variety of conditions treated by him by this method, and the results were in many respects marvelous. It is possible that the use of sea water may stimulate the nutritional and reparative forces of the body and may be of distinct advantage in certain diseases, but it is too much to expect that we may find in this new measure a cure for a large variety of human ills. Regarding the psychic factor in cases of alleged improvement, I recall a case of eczema of the arms in which the patient declared herself to be improved from the first injection, and yet in which the appearance was distinctly and progressively worse.

DR. CHARLES E. DEM. SAJOUS: The important feature in all these conditions is the influence of sea water or the physiologic salt solution on osmosis. The case mentioned by Dr. Schamberg recalls to me a case of aphonia in which the electric current was applied to the larynx with the immediate restoration of the voice. After the patient, a young girl, had left the office, however, I found that there was not a particle of current, as my battery was not working.

Book Notices

BLACK-WATER FEVER. By Captain S. R. Christophers, M.B., I.M.S., and Dr. C. A. Bentley, (Officers on Special Duty). No. 35, of Scientific Memoirs by Officers of the Medical and Sanitary Departments of the Government of India, being the First Report of the Advisory Committee Appointed by the Government of India to Conduct an Inquiry Regarding Black-Water and Other Fevers Prevalent in the Duars, Boards. Pp. 239. Simla: Government of India Monotype Press, 1908.

This is an extensive monograph of 239 pages, giving a comprehensive view of the nature of blackwater fever, its distribution, theories concerning its cause, the larger part (all but the first 66 pages) being given over to the development of their own theory.

Four main theories are cited: First, that blackwater fever is a pernicious form of malarial attack. This has been shown to be incorrect by the fact that there is no evolution of the malarial parasites coinciding with the attack of blackwater fever. Second, that blackwater fever is quinin intoxication. Experience is altogether against the conception that quinin alone may be its cause. Quinin in non-malarial countries is not known to have such an action. Third, that blackwater fever is a distinct disease, due to some specific organism. No parasite other than the malarial, however, has been found in cases of the disease. Piroplasmas in particular have been sought for because of the part they play in hemoglobinuric fevers in other animals. Fourth, that blackwater fever is the result of an induced condition, brought about by repeated malarial infection lasting over a certain time. This view was first brought forward by Stephens and Christophers, and the investigations presented apparently are the outcome of this conception.

A great deal of evidence is given showing that the disease does not occur except in relation to malaria. It is held as possible that quinin may be influential in precipitating attacks "acting in conjunction with a condition induced by previous intense malaria."

In the course of their work the authors reduced the problem to two possibilities: the one, that blackwater fever is a special disease caused by an independent micro-organism; the other, that it is a condition induced by repeated attacks of malaria, but in itself is not malaria.

The first of these possibilities was discarded because no organism other than occasional malarial parasites could be found either in the peripheral or visceral circulation, and because of the general conditions which show the intimate relation of the disease to malaria.

Inasmuch as the most striking features of the disease are acute destruction of the blood, hemoglobinemia and hemoglobinuria, Christophers and Bentley instituted detailed studies, regarding blood destruction by different agents in and out of the body, and the resistance and tonicity of the red cells in malaria and blackwater fever.

They distinguish two types of blood destruction in the body: First, that in which the erythrocytes are destroyed by phagocytic cells, a process to which they give the name of "erythrokatalysis"; and, second, the solution of the cells in the plasma, to which they apply the term "lysemia."

In malaria the destruction of the blood may be so great as to amount to 1,000,000 per centimeter in one day, yet no hemoglobinuria results. The authors assume that this is because the process of blood destruction in malaria is one of erythrokatalysis exclusively, rather than lysemia. They speak of the "specially pronounced action of the malignant tertian parasite in bringing about erythrokatalysis" (p. 127). As an analogy they cite the observation of Levaditi and others, to which are added experiments of their own, that immune hemolytic sera cause anemia, not by destroying erythrocytes in the circulation, but by inducing their phagocytic destruction (erythrokatalysis). They were rarely able to cause hemoglobinemia and hemoglobinuria by the injection of hemolytic sera.

They come to the conclusion, therefore, that the essential method of destruction in blackwater fever is one of lysemia, in spite of the fact that extensive destruction by phagocytosis also takes place. If destruction were exclusively by means of phagocytic cells, no hemoglobinemia or hemoglobinuria would result.

Through extensive experiments they seem to show satisfactorily that the lysemia does not follow because of an alteration of tonicity on the part of the erythrocytes, and that there are no changes in the osmotic pressure of the plasma to account for the blood destruction.

It seems sufficiently logical, in view of the work of the past decade on hemolysins, that the attention of the authors should be directed to the possibility that the prolonged blood destruction of chronic malaria may cause the body to form autohemolysins, which for some unknown reason assume activity at the time of the attack of blackwater fever. Unfortunately, they have not been able to adduce evidence of a direct character showing that this condition exists in blackwater fever. But through an extensive study of bloods and serums in health and in various diseases, the important fact was disclosed that normal bloods frequently contain a lysin (an isolysin) for some other human bloods. Christophers and Bentley speak of two classes of bloods, A and B. In A, which is blood from healthy individuals, the serum contains hemolysin (amboceptor and complement) for the erythrocytes of class B; but the erythrocytes of class A are not susceptible to the accompanying hemolysin, i. e., the hemolysin which is present in the serum of class A blood. In B the erythrocytes are susceptible to the isolysin referred to above, but the serum in this class contains none of the isolysin. On the contrary the serum in B contains "a powerful antibody, which appears to be of the nature of an anticomplement or antiamboceptor directed against the complementophile group of the amboceptor."

The authors suggest that if, in acordance with the hypothesis, the hemoglobinuria of blackwater fever is caused by an autolysin, the attack may be precipitated by the sudden pouring into the circulation of a large amount of complement, through some unknown stimulus and from some unknown source, which may then activate a great quantity of amboceptors at once. Although the work leads to no positive demonstration of a causative agent for the disease, it is valuable as a basis for further studies.

It is to be hoped that the probable relation of quinin to the precipitation of attacks will be studied by these zealous investigators at some future time.

TONO-BUNGAY. By H. G. Wells. Cloth. Pp. 460. Price, $1.50. New York: Duffield & Co., 1909.

In the past, Mr. H. G. Wells has been best known by his scientific romances and his sociologic essays. In the future he is likely to be remembered by a novel—his latest and biggest book, "Tono-Bungay." In reading this narrative, which is written in the first person, one feels that personal interest in the narrator that is inseparable from the perusal of "David Copperfield," while the author's philosophy of life recalls in many ways some of Olive Schreiner's finer passages in her "Story of an African Farm." Briefly, "Tono-Bungay" is the story of a "patent medicine" of that name and the life history of its inventor, Edward Ponderevo, who from being an unknown druggist in an obscure English village, became a Napoleon of finance. "Astraddle on Tono-Bungay he flashed athwart the empty heavens . . . like a stupendous rocket!—and overawed investors spoke of his star. At his zenith he burst into a cloud of the most magnificent proportions." George Ponderevo tells the story: "I was his nephew . . . I made pills for him in the chemist's shop at Wimblehurst, before he began. I was, you might say, the stick of the rocket; and after our tremendous soar, after he had played with millions, a golden rain in the sky . . . I fell again. . . ." The book traces the social trajectory of the two Ponderevos in their splendid passage from obscurity to obscurity.

It is said that Mr. Wells in his earlier days was a druggist, and his story indicates it. None but a druggist or a physician could gauge so clearly the inherent worthlessness of the average "patent medicine." Says the younger Ponderevo, when invited by his uncle to become a partner in the business

of exploiting "Tono-Bungay": "The stuff was, I perceived, a mischievous trash, slightly stimulating, aromatic and attractive, likely to become a bad habit and train people in the habitual use of stronger tonics and insidiously dangerous to people with defective kidneys"—surely a description that would fit many a nostrum possessing greater materiality than "Tono-Bungay." But Tono-Bungay became a vast success and on its much-advertised name other "specialties" were put out. "Tono-Bungay Lozenges" for cases of "fatigue and strain," were enormously popular and, says the nephew, "I really do believe there was an element of 'kick' in the strychnin in those lozenges, especially in those made according to our earlier formula. For we altered all our formulas—invariably weakening them enormously as sales got ahead." On the strength of these successes, "with barely a thousand pound's worth of stuff or credit all told," Ponderevo decided to float a company and went to the public to ask for £150,000. "One hundred and fifty thousand pounds—think of it!—for the good-will in a string of lies and a trade in bottles of mitigated water! Do you realize the madness of the world that sanctions such a thing?" But the public subscribed.

Another phase of the proprietary question—in foodstuffs, not medicine, this time—is incidentally touched on. In a conversation between the elder Ponderevo and his nephew's friend, the latter discourses jokingly on the use of horseradish as an adulterant for mustard. The idea of adulteration is not pleasing either to the friend or to Ponderevo, who remarks sententiously that it is "bound to be found out!" But adulteration is so unnecessary. "Why not do up a mixture—three-quarters pounded horseradish and a quarter mustard—give it a fancy name—and sell it at twice the mustard price?" The principle here involved will be recognized by physicians as having been applied to other things than horseradish and mustard, and in other places than the pages of a novel.

The story is a strong one. Mr. Wells' philosophy is a healthy one and the reading of "Tono-Bungay" leaves a pleasant taste in the mouth and the conviction that its perusal has been well worth while.

HEMATOLOGICAL ATLAS. With a Description of the Technic of Blood Examination. By Karl Schleip, M.D., Scientific Assistant in the Medical Clinic University of Freiburg. English Adaptation of Text by Frederic E. Sondern, M.D., Professor of Clinical Pathology, New York Postgraduate Medical School and Hospital. Half Leather. Pp. 256, with illustrations. Price, $10. New York: Rebman Co.

As an atlas—and this is the real nature of the work—this book is valuable, not to the beginner so much as to the one who is already familiar with the technic of hematology and has had practical experience with it at the bedside. The plates are neat, clearly executed, well colored, artistic and yet true to nature. The descriptions of illustrations are terse yet plain, and brief case histories often add to the interest. The selection of blood preparations has been well made, showing the typical appearances of normal blood, the leucocytoses, the anemias, leukemias, etc., usually in the stained specimen, though occasionally in the unstained. Schleip prefers to make the examination of the unstained specimen between two films and in a hanging-drop chamber, with the blood diluted with physiologic salt solution. The erythrocyte under these circumstances crenates less and shows some peculiarities of form that he believes are more nearly normal than when examined in the ordinary manner. His preference in the way of stain is the Leishman modification of the Romanowsky stain. All the illustrations of stained preparations are from preparations made after this method. While speaking of Schleip's preferences in the way of technic, it may be mentioned that he uses the Sahli hemometer. Whether this accounts for the frequent high hemoglobin findings or not, certain it is that very often an unusually high hemoglobin is recorded as compared to his red corpuscle count. Repeatedly in secondary anemias his color index is more than one.

In general, the author is conservative when it comes to a consideration of mooted questions, yet shows that he has views of his own and is familiar with those of others. Some of the most valuable plates are those in which blood cells of doubtful nature are shown, such as various mononuclear forms, "fragile cells," etc. He hesitates to accept the expression "granular degeneration" of the erythrocyte, feeling that the degenerative character of the granules is not proved. He makes a very positive statement, however—too broad, we think—that this basophilic granulation is invariably present in every case of lead poisoning (p. 105). He is inclined to accept Sternberg's leukosarcomatosis as a reality and to regard the cells found in these cases, which so closely resemble acute leukemia, as true tumor cells and not bone marrow cells. This question, as Schleip says, needs further investigation. The plates of malarial blood, as the one showing trypanosomes, are too few to add much value to the book.

The description of the technic of blood examination is good, so far as it goes, but it is altogether too meager to be of much help to the undergraduate or clinician who is desirous of learning the rudiments of hematology. But as an atlas for class demonstration, as a book of reference and as a valuable addition to the hematologist's library, the work is to be heartily commended.

A SYSTEM OF OPHTHALMIC THERAPEUTICS. Edited and Chiefly Written by Casey A. Wood, M.D., C.M., D.C.L., Late Professor of Ophthalmology and Head of the Department, Northwestern University Medical School. Cloth. Pp. 926, with illustrations. Price, $7. Chicago: Cleveland Press, 1909.

Dr. Wood has combined the knowledge of the specialist with the functions of the editor to make a work which should be welcomed by specialist and general practitioner alike as serving their needs in a special manner. The volume is chiefly the work of Dr. Wood, but he has availed himself of the services of several collaborators for the presentation of special topics. Such collaboration has been secured in the articles on electricity in eye diseases, the examination of school children, and of railway and other corporation employés, the treatment of general conditions affecting the eye and the nervous diseases that may affect the eye. The first part of the volume presents an ophthalmic materia medica which is remarkable for its completeness and which is not confined to medicines merely, but presents an account of apparatus and devices useful in securing the proper application of remedies to the eye. Then follow special chapters on the various diseases in which the proper medicinal treatment is thoroughly described with numerous cross-references to the sections dealing with materia medica. The preparation of the patient for operation and the induction of anesthesia are described, but other matters relating to operation are excluded by the plan of the book. The book is thoroughly up to date, including references to articles as recent as November, 1908.

The treatment of general and nervous conditions affecting the eye enters a field distinct from the specialty of ophthalmology, and while the advice given is good, the question arises whether devoting 120 pages to what is essentially a treatise on general medicine is not somewhat out of place in a special text-book.

The book is evidently the result of an immense amount of work, is exhaustive and will be a standard for many years to come. It will be a guide to the medical treatment of diseases of the eye on which the general practitioner may depend.

HELPS TO MEDICAL DIAGNOSIS. (A card system.) By J. T. Asbury, M.D. Price, $2.50. Wabasha, Minn.: J. T. Asbury, 521 Main St.

These cards are intended to serve the general practitioner as a ready means of review in differential diagnosis, not only in home study, but on occasions of doubt in practice. For this purpose it is pointed out by emphasized type that "they can be carried in a pocket case or bag and referred to at any time or place." While this phrase is consonant with the laudable ostensible object of the cards, there seems to lurk in it a sinister suggestion that nefarious possibilities in the examination room are one reason for the existence of such an aid to diagnosis. The cards, 75 in number, are of different colors, according to the classes of diseases which they treat, so that the desired card may be easily selected. Their arrangement seems convenient. The innumerable errors of

spelling, however—often of a very serious nature—constitute a great blemish and call for careful re-editing.

CANAL RECORD, Sept. 4, 1907, to Aug. 26, 1908. Vol. 1, with Index. Cloth. Pp. 416. Ancon, Canal Zone: Isthmian Canal Commission Printing Office, 1908.

This volume contains much interesting reading, particularly for physicians. The fall of the death rate in the Canal Zone from 76 per thousand in July 1906, to 34 per thousand in July, 1907, is significant of the splendid work of the sanitary department. Besides the official reports and circulars, the volume contains notes on social life in the zone, in which clubs for men and women, entertainments, libraries, fraternal organizations, medical societies, public schools and church matters of various denominations figure largely. This information should dissipate from the public mind the belief that the zone is a deadly place, out of the world, to be shunned like the plague. It is now rather a place where life can be spent and work accomplished in fair comfort and enjoyment. This fact is further emphasized by interesting excerpts describing conditions on the isthmus under previous régimes. A recently discovered report by Surgeon Charles S. Tripler, U. S. Army, of a transit of the isthmus made in 1852 by the Fourth Regiment of U. S. Infantry, in which a severe outbreak of cholera occurred, is particularly interesting. The Captain Grant referred to in the report ultimately became General U. S. Grant. The book is carefully edited and well made, and does credit to all concerned in its production.

TRANSACTIONS OF THE AMERICAN MICROSCOPICAL SOCIETY. September, 1908. Vol. xxviii. Twenty-ninth Annual Meeting Held at Ithaca, N. Y., June, 1906. Paper. Pp. 236.

The papers included in this pamphlet will be of interest to biologists generally, and some are of special importance to medical men. The president's address traces in an entertaining way the evolution of the projection microscope, beginning with the making of spectacles in the thirteenth century, since spectacles were the predecessors of other optical instruments. This historical study is accompanied by full bibliographic references, much enhancing its value. The first article of special interest to the physician is a list of invertebrates noxious to man collected by F. C. Wellman in Portuguese West Africa. The list includes protozoa, worms and insects, the two last classes not being strictly microscopic, but requiring that instrument for their identification. J. H. Powers, in "Further Studies in Volvox," touches the question of sex-differentiation for the study of which he regards this animal as especially suited. "Data for the Determination of Human Entozoa," by H. B. Ward, is a paper of practical clinical importance, especially to the expert in tropical medicine who must keep himself informed on the constantly widening field of intestinal parasites. The pamphlet is well printed and excellently illustrated.

PRACTICAL POINTS IN ANESTHESIA. By Frederick Emil Neef, B.S., B.L., M.L., M.D., New York City. Cloth. Pp. 46. Price, $0.60. New York: Surgery Pub. Co., 1908.

This little book presents the impressions derived from the experience of a practical anesthetist, and as the title states, is made up of practical points. Among the most useful points noted are the maintenance of the surgical plane of anesthesia, reflexes, obstructed breathing, indications for stimulation, postoperative distress, and a differential table of the cases which require superficial, moderate and profound narcosis.

AIDS IN OSTEOLOGY. By Philip Turner, B.Sc., M.B., M.S. (Lond.), F.R.C.S., Demonstrator of Anatomy, Guy's Hospital. Cloth. Pp. 187. Price, $1.25. New York: William Wood & Co., 1908.

Turner states that his desire has been to prepare a concise compend on osteology for the use of students. The text comprises a description of the various bones of the body together with the articulations, muscular attachments, etc., the matter being largely a compilation from standard text-books. There are no illustrations. The compact arrangement and convenient size of the volume will commend it to medical students desiring a manual for constant reference.

BLOOD EXAMINATIONS IN SURGICAL DIAGNOSIS. By Ira S. Wile, M.S., M.D., Cloth. Pp. 161, with illustrations. Price, $2. New York: Surgery Publishing Co., 1908.

This book attempts to enumerate briefly the interpretations possible from blood examinations, particularly that of the white cells. In the first part of the work there is a somewhat elementary discussion of the methods employed. A rather clever classification of anemia is given, but one which, in our opinion, is not quite sharp enough. The discussion of the interpretation of the leucocyte count is very good. The necessity for knowledge of the differential counts is strongly emphasized. Besides the blood findings in surgical affections and allied conditions, those in some medical diseases are discussed. With a few exceptions, the illustrations are fair.

THE AMERICAN TROPICS. By William Thomas Corlett. Half cloth, boards, top edge gilt. Pp.221, with illustrations. Price, $1.50. Cleveland: The Burrows Brothers Co., 1908.

Dr. Corlett has presented in an entertaining manner the daily record of a voyage through the West Indies. The book is well printed and illustrated and makes a volume worth reading and keeping. The reader receives the impressions that Dr. Corlett would make an agreeable traveling companion and that the cruise through the American tropics is full of interest.

Medical Economics

THIS DEPARTMENT EMBODIES THE SUBJECTS OF ORGANIZATION, POSTGRADUATE WORK, CONTRACT PRACTICE, INSURANCE FEES, LEGISLATION, ETC.

McCormack in Virginia

Dr. J. N. McCormack devoted the last two weeks of March to work in Virginia, speaking in eleven cities as follows: Fredericksburg, March 22; Petersburg, March 23; Norfolk, March 24; Danville, March 25; Roanoke, March 26; Lexington, March 27; Lynchburg, March 29; Charlottesville, March 30; Staunton, March 31; Harrisonburg, April 1, and Winchester, April 2. Both in attendance and in interest and enthusiasm the meetings were the most successful of any which Dr. McCormack has yet held. Both the profession and the public have been greatly interested and thoroughly aroused, as shown by the following comments:

Dr. E. L. McGill of Petersburg writes: "His talk was most instructive and made a great impression on the physicians. I trust that we shall derive much benefit from it."

The Roanoke *Evening World*, beside an extended account of the meeting, devotes a column to editorial comments, saying, among other things:

Thousands of Roanokers missed an opportunity last night to hear one of the best addresses on health and public and private methods for promoting health that has ever been given in Roanoke. The Y. M. C. A. Hall was crowded full to hear Dr. McCormack. . . . There ought to have been such a crowding of the Y. M. C. A building and the street outside that the Assembly Hall would have been brought into commission. Instead of the 500 who did hear the address, about three-fourths of whom were women, there ought to have been at least 5,000 and half of them men. The Women's Civic Betterment Club and the Academy of Medicine are to be congratulated on bringing Dr. McCormack here. . . . Dr. McCormack told many things which the public ought to know, and while not all of the citizens of Roanoke were enabled to hear him, there will be few who will be without excuse for not reading his address, which is found in another column.

The Lynchburg *News* says:

The Y. M. C. A. auditorium was filled with a thoroughly representative audience of Lynchburg's leading citizens who listened attentively to Dr. McCormack during an interesting speech lasting nearly two hours, during which he was frequently greeted with applause. The address was full of matter calculated to make those who heard it think and think so deeply as to lead to action for the general betterment of the community.

Dr. V. V. Anderson of Lynchburg writes:

I have been instructed by the medical profession of this city to extend its thanks to the American Medical Association

for the privilege of having Dr. J. N. McCormack in our midst. Never in the history of the medical profession has so much interest been manifested in medical matters. Dr. McCormack has opened the eyes not only of the public, but of the physicians to the sacred trust imposed on the medical profession. . . . That the public is willing and anxious to know these things and to better existing conditions is evinced by the remarkable enthusiasm which greeted his address in the evening. Leading men asked why physicians had not told these things sooner, saying that the public was willing and anxious to concede everything their physicians wanted. A committee was appointed to arrange for frequent meetings between physicians and the public. . . . The good which Dr. McCormack has done us here in Virginia simply can not be estimated. He has certainly opened our eyes to duties that we have for years neglected, either through ignorance or indifference. His departure will leave a more thoughtful, a more active and a far wiser medical profession.

The Staunton *Daily Leader* devotes two columns to an account of the meeting, saying that:

For two solid hours last evening Dr. J. N. McCormack addressed a tremendous audience of Staunton's representative men and women at the Beverly Theater on vital questions bearing on the public health, and not for a moment during the lecture was there a sign of restlessness or disinterestedness on the part of the audience.

Under the heading, "A Modern Crusader," the *Leader* publishes a column editorial, showing such broad-minded appreciation of the efforts of the medical profession as represented by Dr. McCormack, that it is quoted herewith in full:

Dr. J. N. McCormack, who lectured on the prevention of disease at Beverley Theater Wednesday night, is one of the greatest exponents of the gospel of good health that this country has ever produced, and a man better equipped to disseminate the propaganda of sanitation could hardly be found the world over.

The immense audience which heard his lecture recognized this and deplored the fact that all their kith and kindred were not within sound of the speaker's voice.

Dr. McCormack is interesting because he speaks the truth—because he talks entertainingly and convincingly with the facts behind his arguments; because he strikes out fearlessly, exposing sins of omission and commission, hitting a head wherever he sees it; and then pours the oil of his kindness and humanity on the wound he is compelled to make. His object in exposing faults and showing up the fallacies of human acts is not merely to criticize, but primarily to correct. His lecture of over two hours covered a field as broad and expansive as humanity itself. He went over the different professions and pointed out the envy and jealousy of individual members of those segregated, that militated against harmonious action and barred the way of progress. Happily, he said, the medical profession had passed through the worst of this slough and was being wafted to the brighter shore on a reform wave, the like of which has never been seen before in the history of the world. Doctors are organizing and working together for their own advancement, and for that of the cause of humanity, and the science of the prevention and the cure of disease is going forward by leaps and bounds. Physicians recognize this. So do thousands of laymen; but the great men at the head of public affairs, whether they recognize it or not, are slow to admit it, or give their influence to the furtherance of the crusade. The result is that while the Federal Government is spending three out of every four dollars of its revenue on the Army and Navy pensions, for the slaughter of humanity, it spends not one cent for the preservation of human life by the prevention of disease. It spends millions of dollars for the preservation of trees, the promotion of animal husbandry, for the cure and prevention of diseases of plant life, and the dissemination of literature on all these subjects, yet it has appropriated not one single cent for the crusade against the dreadful diseases which are decimating the rank and file of the nation, men, women and children alike. Millions it spends for the preservation of its inanimate flora and fauna and not one cent for the preservation of human life—and this because it has no faith in its doctors and will not heed their warning voice. The United States of America, says Dr. McCormack, the greatest of the great among the nations of the earth, is the only nation of any importance which has no national health bureau, and as a result of this, the little brown men of Japan, a nation classed among the heathen, have a far lower death rate than we, and the health of their army and navy in actual warfare so far outclasses ours that it was a shame and disgrace to this country.

In closing his address, Dr. McCormack advocated the formation of national, state and local health departments, and the frequent public discussion of preventive measures. He is a great crusader, and the memory of his good advice should remain with us and bear fruit to the everlasting benefit of ourselves and our posterity.

POSTGRADUATE COURSE FOR COUNTY SOCIETIES

DR. JOHN H. BLACKBURN, DIRECTOR
BOWLING GREEN, KENTUCKY

[The Director will be glad to furnish further information and literature to any county society desiring to take up the course.]

Ninth Month—Third Weekly Meeting

EPILEPTIC INSANITY

GENERAL CONSIDERATIONS.—Mental symptoms of epilepsy; mental attitude of the epileptic. Classes of insanity induced by epilepsy.

PSYCHIC DEGENERATION.—Somnolence following attacks becomes more marked; weakens intellectual processes, memory, attention, speech, judgment, concepts, etc. Irritability of temper, hypochondriacal depression, hallucinations, etc.

EPILEPTIC DEMENTIA.—Gradual progress, course, terminations.

ACUTE TRANSITORY EPILEPTIC INSANITY.—Sudden onset, ecstatic or terrifying hallucinations and delusions, disturbance of consciousness, stuporous condition, impulsive acts, dream states, amnesia, abrupt termination; tendency to recurrence.

CHRONIC EPILEPTIC INSANITY.

DEMENTIA

Definition, epileptic, alcoholic, etc., secondary to acute or chronic psychoses, paralytic, senile, primary, etc.

SECONDARY DEMENTIA.—Symptoms: Defective memory, deficient ideation, feeble judgment, incoherent speech, hallucinations, delusions (emotional), depraved habits, automatic movements. Types, apathetic and agitated. Chronic course.

SENILE DEMENTIA.—Heredity, age, sex, strain, cardiovascular disease.

Symptoms: Failure of memory, lack of judgment, negligent in habits, terrifying hallucinations and illusions, persecutory delusions, increase of symptoms at night. Physical symptoms, general senile changes, tremors, aphasic and paraphasic attacks, at times hemiplegia and monoplegia. Complains of pain over body, vertigo, tinnitus, etc.

Pathology: Changes in cranium, meninges, cortex, blood vessels, ventricles and ependyma, cerebrospinal fluid, ganglion cells and association fibers.

PRIMARY DEMENTIA.—Etiology: Age, heredity, physical and mental stress.

Symptoms: Gradual onset, inhibition of thought, idea associations and memory; senses fail to respond to stimuli, becomes physically and mentally expressionless, no excitation whatever, immobile. Physical symptoms. May be complicated by melancholia, stuporous paranoia or neurasthenia.

Course, duration, terminations.

DEMENTIA PRÆCOX (Kraepelin)

ETIOLOGY.—Frequency, age, sex, heredity, acute infections.

GENERAL SYMPTOMS.—Mental symptoms: Enfeeblement of mind, hallucinations and illusions, orientation, memory, attention and interest, verbigeration, judgment, delusions, emotional deterioration, stereotypy, negativism, automatism. Physical symptoms: Syncope, general and local spasms, transitory paralyses, aphonia, choreiform movements, apnasia, exaggerated reflexes, vasomotor disorders, pulse and temperature, anemia, changes in weight.

TYPES.—Hebephrenic, catatonic and paranoid; symptoms characteristic of each.

Miscellany

Mr. Bernard Shaw on the Medical Profession and the Competitive System

At a meeting of the Medico-Legal Society in London recently, Mr. Bernard Shaw opened a discussion on the socialist criticism of the medical profession. The following report of his remarks is abridged from the account given in the *Lancet*, Feb. 27, 1909:

Mr. Shaw said that he belonged to a generation which began life by hoping more from science than perhaps any generation ever hoped before and possibly might ever hope again. The doctor of the present day had been practically driven into the position of a private tradesman. Nowadays almost all the old professional pretensions and delicacies had been dropped. A doctor gave an opinion and the patient asked him what he owed as boldly as one would a shopkeeper in the street. He could remember the time when one did not do that. This position had never really been recognized, but it must be realized and admitted that as competition in ordinary trade and business had been shown by elaborate theoretic demonstration to be the best thing in the world, medical affairs could form no exception. The idea of a doctor being a tradesman was abhorrent to any thoughtful person, and therefore considerable restrictions were imposed. Advertising in the ordinary way was a thing forbidden. When a professional man had become so successful that he wanted to "weed out" his poorer patients and keep his richer ones, he raised his prices, and also gave up the power forever of recovering his fees in the county court, which was what the ordinary practitioner very largely had to do at the present time. There being no systematic state organization of his profession, naturally the doctor was forced by circumstances—however repugnant to his feelings—to go into the commerce of healing and to become a professional "medicine man"—a professional healer—who sold "cures" because that was what the public went to him for. The great mass of the medical profession had to get what they could and be very glad to get it. One result of competition in the medical profession was that the average doctor of the present day was an abjectly poor man. Four out of five of the adult male population of Great Britain were laborers working for weekly wages. They generally had the benefit of the very best medical advice, went to the hospital, and were operated on by the most skillful surgeons. But a large class went to the clubs. If a doctor had a large club practice and could not afford an assistant, one of the things that would happen to him was that he would give up ever taking off his clothes. The night bell of such a practitioner never stopped. Doctors always had to give a good deal of gratuitous advice, and when their actual work was stopped through illness or anything else, their earning power stopped. The man of business and ordinary tradesman had a great advantage in that respect. Doctors had also appearances to keep up and incurred a great many expenses really for the sake of their patients. It was therefore clear why many of the medical men who were in a tolerable practice were much poorer than they appeared to be, and why the great mass of doctors had to be described as miserably poor men.

The attitude of socialism toward the poor man was always that the poor man was necessarily a bad and dangerous man. The attitude of the man who was not a socialist toward poverty was that poverty was a very good thing, that it developed character, and in other particulars had a beneficial effect. But the really sensible man always regarded poverty as a bad thing and held that the poor man was always dangerous, and that the doctor was a specially dangerous man when poor. The doctor's poverty at the present time drove him necessarily into doing things which he would not do if he were independent. He was—like most men—as honest as he could afford to be. The carrying out of all the various hygienic measures which doctors knew to be scientifically necessary would be enormously expensive, and the slightest attempt to force them on patients or to let patients know that the absence of them was dangerous would cost a man his practice and his livelihood. What the great mass of patients really needed, at the present time, was not medicine or operations, but money, better food and better clothes—and more frequent changes of the latter—and well-ventilated and well-drained houses; but what was the use of prescribing those things to unfortunate people who could hardly keep body and soul together? The patient, not being able to afford scientific treatment, demanded cheaper "cures," and the result was that the doctor had to gratify him in a way. The doctor depended on his patient for his livelihood, and therefore was dependent on the patient's ignorance, and finally had to flatter all his worst delusions. A doctor was like a servant trained in one of those big charitable institutions that train servants. He obtained his training at the hospitals, when he had nurses and antiseptics, and so on. He was placed in a building wonderfully and beautifully built, with no right angles, but beautifully rounded corners; and then, after all that (exactly like the servant), he was suddenly pitched into a poor district and had to go through life in surgically dirty clothes and do his work in surgically dirty rooms with surgically dirty people who could not afford medicines or anything, and he got a sort of skill at it. Mr. Shaw contrasted the position of the ordinary doctor and that of the medical officer of health, with his independent salary, and his position irrevocable by the local authorities. The medical officer of health was in an ideal position—the socialist position—the position in which socialism wanted to place all doctors.

A doctor at the present time was expected to do everything connected with his profession. That did not apply to the other professions. The judge sentenced a man to be hanged, but he was not expected to be the hangman. If he were the doctor he would be expected to act as hangman. There were men of extraordinary dexterity as operators whose whole time should be reserved for the most difficult cases, but instead one found those men poulticing whitlows and doing trumpery dressings that should be done by the nurse. They were found prescribing for ladies who had the same reason for asking for tonics as the charwoman had for asking for gin. In order to get the maximum of hygienic influence and the greatest economy in using the skill of the profession, it was necessary to get medical men organized, so that different grades did different work, and that the mere routine should not be left to the best men to do. Such organization was altogether impossible while private practice was the rule. It could be done only if the profession was organized publicly by the state. A private practitioner could not get ahead of the prejudices of his patient, and one of the things from which the doctor ought to be released was that abject dependence on his patient. Public opinion would be the final arbiter all along, but it was important to get every doctor in favor of educating the public scientifically, whereas now the doctor had the very greatest interest in preventing the patient from knowing anything at all. The medical profession must really be socialized, for the reason that medical men were finding themselves more and more driven to claim powers over the liberty of the ordinary man which could not possibly be entrusted to any private body whatever. If these things were going to be done and if scientific opinion was going to compel people on such a scale, then there must be democratic control. It would be intolerable tyranny unless it were controlled by the people. They were coming more and more to the point of giving the doctor the power of saying what was to be done with the child and denying that power to the parent. It was a curious step and one that would be fought energetically. It was impossible to leave the body in the hands of a private practitioner.

"You must make up your minds," concluded Mr. Shaw, "that the inevitable result is the socialization of the medical profession. As to what will happen when you have the doctor in the responsible, dignified and independent position of a public servant, instead of a private tradesman—as to what will happen to the surviving private practitioner I do not know. If a doctor finds himself in the position of depending on the caprice and ignorance of patients he will always, under

socialism, be able to get an independent position in the public service, and if he elects to continue in private practice he will not be compelled to make the humiliating concessions and the treacheries to science that he has now to do. Having the alternative of public service, he will be in as independent a position as if he were a public servant, and, on the other hand, the patient will always have the choice of getting public attendance; and so he, having the alternative, will be as well off with the private doctor as he will be with the public doctor."

Treatment of Nephritis with Tincture of Cantharides.—Lancereaux of Paris has been using this drug since 1892 in a number of cases of nephritis characterized by irritation of the epithelium of the uriniferous tubules with almost complete anuria. The anuria being the result of obstruction of the tubules by the swollen and degenerated epithelium, it seems logical to combat it by a drug which acts directly on this epithelium. Tincture of cantharides has a destructive action on the epithelium in large doses, but in small amounts merely modifies it in the desired direction. In one of the typical cases described in his communication read before the Academy of Medicine lately a child of 8 with scarlatinal nephritis, relative anuria with 2.5 per cent. albumin and much sediment consisting of blood corpuscles and epithelial tube casts, with menacing uremia and great depression, was restored to health by ten drops of tincture of cantharides given in syrup in the course of five days. The urine increased from 200 to 600 gm. within twenty-four hours after the first dose of a single drop of the tincture. He remarked that the effect of this single drop shows that it does not take much to save a life, for there was not a shadow of doubt as to the impending peril in this case. The practitioner may well meditate on this, he added, never forgetting that a medicine given at the right time and in the right dosage may be followed by almost miraculous results. In three other cases in young men the symptoms of epithelial nephritis developed after excess in river bathing, etc. After failure of the ordinary measures, Lancereaux gave five drops of the tincture, increasing to twelve drops in the course of a week and the output of urine rapidly returned to normal. He gives the tincture in a mucilaginous vehicle and always uses a freshly made preparation for each case as an old tincture soon loses its properties. In differentiating the type requiring this treatment, the tint and density of the urine, the presence of epithelial tube casts and cells are important diagnostic aids besides the tendency to anuria. They reveal the primarily epithelial nature of the disturbances which justifies this treatment with tincture of cantharides. Nephritis affecting especially the arteries and connective tissue is not benefited by it, as he has demonstrated in a number of cases. In these cases diuretics do wonders, supplemented by a drug to act on the connective and vascular tissue, such as potassium iodid.

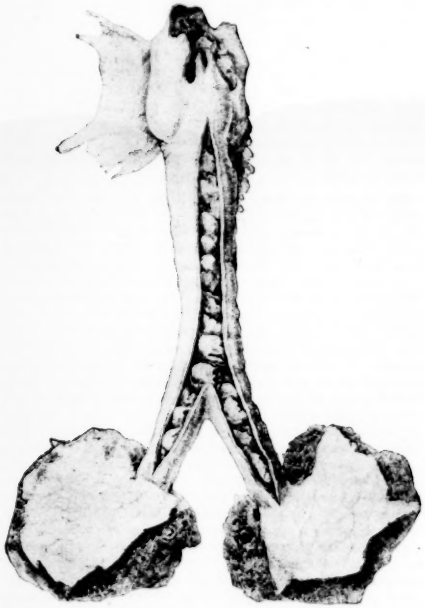
Factors Which Determine Growth and Activity of the Mammary Gland.—C. Foa (*Arch. di fisiol.*, v, 520) gives the results of many experiments undertaken to determine the factors which influence the growth and activity of the mammary gland. Subcutaneous or intraperitoneal injections of extracts of calf embryos into adult female dogs gave negative results if the extract was first heated to 110 C. Similar results were obtained on injection of heated extracts of embryonic thymus and thyroid glands. Unheated extracts gave positive results. A watery extract of calf embryos injected daily for twenty days into a dog (non-lactating) produced perceptible enlargement of the mammary glands after fifteen days. After thirty-five days a fluid was squeezed out of the nipple which microscopically looked like milk, and which reduced Fehling's solution. Injection of embryonic extracts into a lactating dog produced no change in the mammary secretion. Transplantation of mammary glands gave negative results. Transfusion experiments were negative. The blood of a lactating goat produced no change in the mammary gland of a non-lactating goat, and *vice versa* no change in the secretion of the lactating gland. The change of a resting gland to the lactating stage is due to the influence of a hormone secreted by the embryo. This hormone is not specific for the individual animal or to a given species. It is not clear whether extracts of embryos have an influence on the mammary glands of pregnant animals. A mammary gland which has greatly developed under the influence of the embryonic hormone is capable of secreting milk.

Solid Ovarian Teratomas.—Sjöval, in *Hygica Festband*, published by Svenska Läkaresällskapet in celebration of the centennial of its existence, points out that the term ovarian teratoma is a collective one including tumors of different histologic types. He regards the so-called secondary malignant degeneration as without basis in the structure of the tumors. Solid ovarian teratomas may be divided into two classes—malignant and non-malignant. In the first class the malignancy may be that of sarcoma, neuroepithelioma or ordinary carcinoma. This group gives the same unfavorable prognosis as ordinary malignant tumors. The second group falls into two sub-groups; (a) the tissues all tending to maturity; (b) all or some of the tissues persisting at an early embryonal stage..

The Coagulation Time of the Blood of Man.—T. Addis (*Quart. Jour. Exper. Physiol.*, 1908, I, 305) describes a new method of estimating the coagulation time. This involves rather elaborate apparatus, devised by Addis, to meet the "four conditions which must be fulfilled by any method which is to yield results which can be relied on:" (a) A uniform method of obtaining the blood; (b) constant temperature during an experiment; (c) the same amount of contact with foreign bodies; (d) a clear and definite end point of coagulation. All previous methods are discussed and pronounced unreliable. It is found that temperature has a great effect on the time of coagulation. The variation in time is most marked with the lower temperatures. Thus from 3 C. to 7 C., there is a diminution of time of more than 30 minutes (from 63 minutes, 20 seconds to 32 minutes, 45 seconds). "At about the normal temperature of the body the coagulation time is shortest, 1 minute, 25 seconds, becoming gradually longer at temperatures above 40 C. and below 36 C." In over 300 observations there was an absence of the supposed diurnal variation in the coagulation time of the blood. "For twenty days the coagulation time of my own blood and that of certain other persons was taken every hour or two, and in no one of the charts prepared from these observations do any variations occur which are outside the limit of experimental error." Addis also concludes that calcium and citric acid, when given by the mouth, have no influence on the coagulation time.

Prevention of Anesthesia Asphyxia and Postoperative Pneumonia.—The accompanying illustration, reproduced from the *Lyon Chirurgical*, March, 1909, page 573, shows the advisability of emptying the stomach as a routine measure before any operation on this organ. The case was one of stenosis of the pylorus with much vomiting and almost incessant hiccough. The usual preliminary lavage of the stomach was omitted on account of the incessant vomiting and the possible shock from the lavage and for the additional reason that it is difficult to prevent fluid from the lavage finding its way into the air passages. The patient was tranquil under a small amount of the Billroth mixture, but vomited as soon as the surgeon commenced the gastroenterostomy. A few moments later threatening asphyxia required artificial respiration, under which the operation was concluded, but recurring asphyxia proved fatal. The larynx and trachea were found plugged with grape skins and seeds. Since this experience, Gouillioud, who reported the case at a meeting of the Lyons *Société de Chirurgie*, makes a practice of lavage of the stomach the day before the operation, as he believes that stenosis of the pylorus is peculiarly liable to entail such accidents, although vomiting in the course of the anesthesia at any operation may have similar results. Vomiting occurs more readily when the anesthesia is not deep enough to abolish the reflexes.

It would have been better in the case reported, he says, to have used more of the anesthetic or none at all. Latarjet reported a case in 1905 in which the patient was suffocating from aspiration of clots during resection of the jaw, and he aspirated out the clots through a rubber tube with a hydrocele syringe. Gouilliloud suggests the possibility of preventing such accidents during operations by applying a clamp to the cardia, shutting it off from the stomach proper. In two cases recently he used a Doyen stomach forceps and found that the desired purpose was thus attained without the slightest inconvenience. The measure may be found useful in cases



Trachea and bronchi filled with grape skins which were aspirated after vomiting during anesthesia and which caused fatal asphyxia.

contraindicating lavage for any reason or in which it has been omitted. He adds that this clamping of the cardia may aid in reducing the number of cases of postoperative pneumonia—the more extensive his experience the more he is convinced that these postoperative pneumonias are in reality due to matters finding their way from the esophagus into the air passages—"deglutition pneumonias."

Marriages

WILLIAM HENRY LUEDDE, M.D., to Miss Nettie Belle Shryock, both of St. Louis, Mo., March 24.

ADOLPH B. SMITH, M.D., Woodstock, Ill., to Miss Olive Branche Alexander of Chicago, March 10.

WILLIAM J. RICHARDSON, M.D., Greensboro, N. C., to Miss Annie Lewis Faulkner of Danville, Va., March 17.

HARRY FLETCHER WHITE, M.D., Wachapreague, Va., to Miss Sarah Elizabeth Cottrell, at Richmond, Va., March 24.

WILLIAM B. CARR, M.D., Washington, D. C., to Miss Eleanor McGill of Jersey City, N. J., in Washington, March 19.

JOHN FRANKLAND ROWLAND, M.D., Hot Springs, Ark., to Miss Lilian Driver of Osceola, Ark., March 25.

Deaths

Henry Tucker Percy, M.D. University of Virginia, Charlottesville, 1872; a member of the American Medical Association; medical inspector U. S. Navy; who entered the naval service in 1873, and during the Spanish-American war was surgeon of the U. S. *Charleston*, and later on duty on the *Olympia*, and at the Norfolk and Washington Navy Yards; in command of the U. S. Naval Hospital at Yokahama, Japan, in 1905 and 1906; died at the Naval Medical School Hospital, Washington, March 31, from uremia, aged 59.

Letchworth Smith, M.D. College of Physicians and Surgeons, New York City, 1898; who served in Porto Rico during the Spanish-American War; director of laboratories at the Hospital College of Medicine, and later at the University of Louisville; chief inspector of milk in the Louisville Health Department; organizer of the Babies' Milk Commission; and the Tenement House Commission; died in his home April 7, from organic heart disease, aged 39.

Charles Joseph Adrien Le Claire, M.D. University of the Victoria College, Coburg, Ont., 1887; a member of the Connecticut State Medical Society; once president of the Windham County Medical Society and of the French National Congress of Connecticut; a member of the local board of U. S. Pension Examining Surgeons, and of the school board of Killingly; died at his home in Danielson, April 1, aged 45.

Charles Wright Huff, M.D. University of Pennsylvania, Philadelphia, 1874; a member of the Michigan State Medical Society, and the Kalamazoo Academy of Medicine; United States pension examining surgeon for the district; for several years president of the board of trustees of Gobleville; died March 31, at his home, aged 59.

John Hudson Thompson, M.D. College of Physicians and Surgeons, New York City, 1852; of Goshen, N. Y.; surgeon of the One Hundred and Twenty-Fourth New York Volunteer Infantry, and later brigade and division surgeon, during the Civil War; died in Middletown, N. Y., April 3, from senile debility, aged 82.

Robert Crane, M.D. Yale University, New Haven, 1843; town clerk and postmaster of Middlebury, Conn., for several years, and in 1857 a member of the house of representatives; and later assistant assessor of internal revenue; died suddenly at his home in Waterbury, Conn., March 31, from senile debility, aged 87.

John Jacob Eargle, M.D. University of Nashville, Tenn., 1888; a member of the American Medical Association; and formerly health officer of Comanche county, Texas; died at his home in Proctor, March 16, 1908, from cerebral hemorrhage, aged 51.

David E. Bruton, M.D. College of Physicians and Surgeons, San Francisco, 1902; of Austin, Nevada; died in his office, Nov. 20, 1908, from the effects of a gunshot wound, believed to have been self-inflicted with suicidal intent, while despondent, aged 35.

Albert Groves Ellinwood, M.D. University of Buffalo (N. Y.), 1848; of Attica, N. Y.; a member of the American Medical Association; local surgeon of the Erie Railroad; died in a hospital in Buffalo, March 26, after a surgical operation, aged 84.

Robert Eleazer Ensign, M.D. (N. Y.) Medical College, 1857; a member of the Connecticut State Medical Society and a veteran of the Civil War; for 20 years medical examiner of Berlin, Conn.; died at his home, March 29, from heart disease, aged 75.

Milton LeRoy Somers, M.D. Medico-Chirurgical College, Philadelphia, 1897; a member af the Atlantic City (N. J.) Academy of Medicine and secretary and health officer of Atlantic City; died at his home, April 3, from tuberculosis, aged 38.

Jacob Theodore Simmons, M.D. Tulane University, New Orleans, 1883; a member of the American Medical Association; of Simmonsville, Miss.; died in the Hôtel Dieu, New Orleans, February 22 from disease of the heart and liver, aged 55.

J. Orpheus Jolley, M.D. Sioux City (Iowa) College of Medicine, 1904; of Dixon, Neb.; a member of the Nebraska State Medical Association; died in St. Vincent's Hospital, Sioux City, Iowa, April 1, from traumatic tetanus, aged 37.

Stephen M. Gonzalez, M.D. Kentucky School of Medicine, Louisville, 1886; assistant surgeon in the Army during the

Spanish-American War; died in a hospital in Pensacola, Fla., March 27, from pneumonia, aged about 45.

Perry David Goldsmith, M.D. University of the Victoria College, Coburg, Ont., 1868; L.R.C.P., L.S.A., M.R.C.P., Eng., 1887; M.R.C.S., London, 1892; of Toronto; died in Belleville, Ont., April 5, from heart disease, aged 64.

Willard Southard Whitney, M.D. Homeopathic Hospital College, Cleveland, 1868; a pioneer practitioner of Big Rapids, Mich.; died at the home of his daughter in Pontiac, April 2, from senile debility, aged 90.

Joseph Clifford Moore, M.D. New York Homeopathic Medical College, 1866; a member of the New Hampshire Senate in 1880; died at his home in Laconia, N. H., March 19, from cerebral hemorrhage, aged 64.

James Valentine Pope, M.D. St. Louis Medical College; assistant surgeon in the army during the Civil War; died at his home in Forest Grove, Ore., Aug. 2, 1908, from chronic disease of the intestine, aged 72.

J. Edward Moyler, M.D. Medical College of Virginia, Richmond, 1864; assistant surgeon in the Confederate Army and Navy during the Civil War; died at his home in Petersburg, Va., March 27, aged 67.

Arthur W. G. Farrar, M.D. Leonard School of Medicine, Raleigh, N. C., 1893; of Richmond, Va.; died in the Central State Hospital, Petersburg, from valvular heart disease, March 3, aged 39.

Joshua T. Wesley, M.D. University of Louisville (Ky.), 1865; a member of the American Medical Association; died at his home in Middleburg, Ky., March 24, from pneumonia, aged 69.

Thomas S. Foley, M.D. Hospital College of Medicine, Louisville, 1884; of Pineville, Ky.; a member of the American Medical Association; died in Louisville, March 25, from meningitis, aged 47.

William Worrick Holmes, M.D. Barnes Medical College, St. Louis, 1903; of Harrisburg, Ark.; died recently in St. John Hospital, St. Louis, from organic heart disease, aged 47.

Charles C. Hummel, M.D. College of Physicians and Surgeons, Chicago, 1899; of Ransom, Ill.; died in the Oakes Home, Denver, March 15, from pulmonary tuberculosis, aged 39.

Lester H. Luse (license, Ohio, 1896); for twenty-five years secretary of the Lake County (Ohio) Pioneer Society; died at his home in Willoughby, Ohio, April 1, aged 71.

Alexander Rixa, M.D. Rush Medical College, Chicago, 1884; of New York City; died in Lebanon Hospital, New York City, March 16, from carcinoma of the rectum, aged 65.

Newton Clark Stevens, M.D. University of Maryland, Baltimore, 1875; a member of the Louisiana State Medical Society; died at his home in Ama, January 28, aged 62.

Ammi Ruhamah Hahn, M.D. Harvard Medical College, Boston, 1869; a member of the Massachusetts Medical Society; died at his home in Boston, March 30, aged 67.

Joseph W. Rhoades, M.D. Medical College of Georgia, Augusta, 1872; died at his home in Jewell's, near Sparta, Ga., March 26, from heart disease, aged about 60.

J. Harvey Guthrie, M.D. Starling Medical College, Columbus, 1898; formerly of Farmington, N. M.; died in Urichsville, Ohio, March 14, from tuberculosis, aged 37.

Roy S. Blackburn, M.D. Keokuk (Iowa) Medical College, 1898; a member of the Illinois State Medical Society; died at his home in Low Point, March 28, aged 36.

C. L. Clawson, M.D. Medical College of the State of South Carolina, Charleston, 1843; died at his home in Richburg, S. C., March 27, from septicemia, aged 89.

Ernest F. G. Horst, M.D. New York University, New York City, 1876; died at his home in St. Paul, Minn., March 26, from an overdose of chloroform, aged 55.

Charles W. Harwood, M.D. Jefferson Medical College, Philadelphia, 1883; died at his home in Worcester, Mass., March 26, from disease of the liver, aged 52.

Orrin Hart Boynton, M.D. Dartmouth Medical School, Hanover, N. H., 1861; of Lisbon, N. H.; died at the home of his son in that city, March 27, aged 74.

Samuel Friedlander, M.D. Minnesota Hospital Medical College, Minneapolis, 1885; died at his home in Minneapolis, Feb. 21, from arteriosclerosis, aged 68.

Edwin Charles French, M.D. Hospital College of Medicine, Louisville, 1899; died at his home in El Paso, Texas, March 23, from typhoid fever, aged 38.

James H. Wilson, M.D. Jefferson Medical College, Philadelphia, 1885; of Hazelton, Pa.; died in a hospital in Pittsburg, February 4, from pneumonia.

George W. Bronson, M.D. Rush Medical College, Chicago, 1881; died at his home in Streator, Ill., March 31, from cerebral hemorrhage, aged 55.

Charles B. Jared, M.D. Hahnemann Medical College, Chicago, 1905; a lecturer in his alma mater; died at his home in Chicago, April 5, aged 52.

Luigi Galvani Doane, M.D. University of Michigan, Ann Arbor, 1871; died at his home in New York City, April 4, from heart disease, aged 59.

David W. Moore, M.D. College of Physicians and Surgeons, New York City, 1855; died at his home in Waupun, Wis., January 23, aged 83.

Daniel Wixon Winters, M.D. Jefferson Medical College, Philadelphia, 1873; died at his home in New Danville, Pa., February 13, aged 61.

William Clay Frew, M.D. Long Island College Hospital, Brooklyn, N. Y., 1869; died at his home in Coshocton, Ohio, April 2, aged 64.

John H. Brooke, M.D. Starling Medical College, Columbus, Ohio, 1864; died at his home in Newark, Ohio, April 2, from nephritis, aged 78.

Mary Eudora Farnham Whitney, M.D. Boston University School of Medicine, 1893; died at her home in Medford, Mass., March 30.

Allen P. McCullough, M.D. University of Nashville, Tenn., 1857; of Milton, Tenn.; died at his home, March 13, aged 73.

Allen A. Webster (license, Neb., 1891); died at his home in Mills, Neb., recently, from general paresis, aged 75.

Allen Burdick, M.D. Harvard Medical School, Boston, 1882; died at his home in Boston, March 29, aged 52.

Medical Education and State Boards of Registration

COMING EXAMINATIONS

FLORIDA: Tallahassee, May 19-20. Sec., Dr. J. D. Fernandez, Jacksonville.

GEORGIA: Regular: Capitol Bldg., Atlanta, April 30-May 1. Sec., Dr. E. R. Anthony, Griffin. Homeopathic: Atlanta, May 1. Sec., Dr. R. E. Hinman, 153 Whitehall St.

LOUISIANA: Regular: New Orleans, May 20-21. Sec., Dr. Felix A. Larue, 211 Camp St. Homeopathic: 919 St. Charles St., New Orleans, May 3. Sec., Dr. Gayle Aiken, 1102 St. Charles Ave.

MASSACHUSETTS: State House, Boston, May 11-13. Sec., Dr. Edwin B. Harvey, Room 159, State House.

MISSISSIPPI: State Capitol, Jackson, May 11-12. Sec., Dr. S. H. McLean.

MISSOURI: Kansas City, May 17-19. Sec., Dr. J. A. B. Adcock, Warrensburg.

NEBRASKA: State Capitol, Lincoln, May 25-27. Secretary, Dr. E. J. C. Sward, Oakland.

NEVADA: Carson City, May 3. Sec., Dr. S. L. Lee.

NEW YORK: Albany, May 18-21. Dr. Charles F. Wheelock, Albany.

University of Missouri Adopts Higher Requirements

The University of Missouri will increase the requirements for admission beginning Sept. 1, 1910, to two years of liberal arts' college work, including specified courses in physics, chemistry, zoology and modern languages. One year of such work has been required since 1906.

Leland Stanford University's New Medical Department

The announcement of the Department of Medicine of the Leland Stanford Junior University, formed by the union of Cooper Medical College with that university, has just been received. It is stated that three years of preliminary college work, including one year each of physics, chemistry and physiology or biology with laboratory work and a reading knowledge of French or German will be required for admission. The work of the first three semesters of the medical course is to be given in Palo Alto and the work of the last five semesters in San Francisco.

Medical Education and Nostrums, Sixth Letter

The following is the sixth of a series of letters issued jointly by the Council on Medical Education and the Committee on Medical Teaching of the Council on Pharmacy and Chemistry:

To Medical Teachers:—This letter contains a few suggestions for the departments of materia medica and pharmacy. These departments, and those of pharmacology and therapeutics, are the most directly interested in the conditions which we have described. On them has been placed the entire blame for these evils. This charge is certainly exaggerated; but they should do their utmost to deprive it of any basis.

Materia Medica.—The classical course in materia medica is the very antithesis of the nostrum business. For this very reason, perhaps, there is some danger that the forest may be hidden by the trees. Every occasion should be taken to impress on the student the general superiority of the standard, established drugs (see O. T. Osborne: "The Sufficiency of Official Drugs," THE JOURNAL, Oct. 31, 1908, p. 1477): the fact that these have been studied and tested by a quantity of clinical experience which vastly exceeds that available for any of the novelties; the fact that they have already undergone the expurgation of the survival of the fittest, while the new remedies are continually being discarded as useless. The history of digitalis, or the classical example of venesection, may be cited as object lessons in overconfidence in such superficial observations as are now used to bolster up the status of the nostrums.

The ordinary course of materia medica often fails to place sufficient emphasis on these points of superiority, or on the fact that it is rarely necessary to use other than official remedies. It should insist that the prescriber, in using unofficial remedies must take on himself the responsibility of deciding whether these have been thoroughly tested under proper experimental conditions, by independent investigators, and not merely by the paid agents of the manufacturers.

To render this teaching effective, however, the course in materia medica should discard those official substances which experience has shown to be superfluous.

Pharmacy.—This department can teach to the student the scientific superiority of simple pharmaceutical preparations over nondescript mixtures. By the demonstrations of official products, and by a little individual practical work on the part of the student, it can impress the fact that pharmacy is not a mystery controlled exclusively by the nostrum houses. By a little practice in dispensing, it can teach to the student the feasibility of extemporaneous prescribing for the individual patient. In the same way it can help to remove the weak dread of incompatibilities.

Medical Education and Nostrums, Seventh Letter

This is the seventh of a series of letters issued jointly by the Council on Medical Education and the Committee on Medical Teaching of the Council on Pharmacy and Chemistry.

To Medical Teachers:—This letter contains a few suggestions for the departments of pharmacology and therapeutics.

Pharmacology.—This department should teach the student how the actions of medicines must be investigated. If it is successful in creating a taste for high standards in experimental work, it will have done its full share toward eradicating the nostrum evils. The latter, however, furnish excellent object lessons of how experimental work should *not* be done. The value of pharmacology can be greatly emphasized to the student by analyzing the claims of almost any proprietary mixture, or by incidentally comparing the evidence for any of the new products, in quality or quantity, with that of the official substance with which it competes. The claims for cactin or for isopral would furnish instructive examples. (Studies of the actions (?) of cactin may be found in THE JOURNAL, Sept. 21, 1907, p. 1023, and March 21, 1908, p. 956.)

Toxicology.—This department can draw some of its best illustrations of acute and chronic poisoning by morphin, heroin, cocain, chloral, atropin, arsenic, acetanilid, phenols, and the synthetics, etc., from the nostrum literature, and thus emphasize the danger of prescribing little-known mixtures and drugs; the danger of adding to the work of the asylums or of the coroner.

Therapeutics.—This department should be particularly careful to inculcate a sound conservatism, both by precept and example. The deceptive nature of superficial clinical observations, the danger of confounding *post hoc* and *propter hoc*, the temptation of making far-reaching deductions from slender data—these should all be emphasized as an incidental part of the ordinary teaching. Here again examples from the nostrum literature furnish the most striking object lessons.

It is also necessary to combat the false statement that extraordinary virtues are developed in ordinary remedial agents by mysterious methods of combination, or by the addition of inactive substances. This might seem superfluous; but constant reiteration gradually gains credence even for the greatest absurdities. Many examples of this deception might be given, but Anasarcin and Anedemin (THE JOURNAL, May 4 and 11, 1907, pp. 1535 and 1641) are among the most flagrant.

This department should also emphasize the foolishness of discarding through the employment of secret or semi-secret mixtures the therapeutic data, positive and negative, so painstakingly accumulated by preceding generations of physicians, and thus the foolishness of the argument that the physician is not concerned with the composition of a remedy, but only with its actions.

The practicing therapeutist also has superior facilities for observing numerous cases of the abuse of "ethical" proprietary remedies by the laity. The incidental relation of a few personal experiences of this sort can not fail to be profitable to his students.

Prescription-Writing.—No single factor has played so powerfully into the hands of the nostrum-maker as insufficient drill in prescription-writing. "Drill" is what is needed. The principles and practice of prescription-writing can only be acquired effectively by frequent practice. This should teach not only the minutiæ of the technic of this important art, but also the individual study of the conditions of the case; the special adaptability of the different preparations of the official materia medica, the methods of administration, the proper vehicles and flavors, and the avoidance of incompatibilities. The manufacturers of pharmaceutical "specialties" say that their richest harvest is gathered from those physicians whose education in this department has been neglected.

Alabama January Report

Dr. W. H. Sanders, chairman of the State Board of Medical Examiners of Alabama, reports the written examination held at Montgomery, Jan. 7-10, 1909. The number of subjects examined in was 10; total number of questions asked, 66; percentage required to pass, 75. The total number of candidates examined was 27, of whom 7 passed, including 2 non-graduates, and 20 failed, including 13 non-graduates. The following colleges were represented:

College	Year Grad.	Per Cent.
PASSED		
Medical College of Alabama	(1890)	78.
University of Michigan	(1907)	75.
University and Bellevue Hospital Medical College	(1905)	84.
University of Pennsylvania	(1907)	76.
Vanderbilt University	(1903)	84.
FAILED		
National Medical University, Chicago	(1907)	52.1
Boston University	(1900)	65.8
Leonard School of Medicine	(1905)	52.3
Meharry Medical College	(1907)	41.1
University of the South	(1907)	39.7, 56.8
University of Nashville	(1907)	38.1

District of Columbia January Report

Dr. George C. Ober, secretary of the Board of Medical Supervisors of the District of Columbia, reports the written examination held at Washington, January 12-15, 1909. The number of subjects examined in was 8; total number of questions asked, 80; percentage required to pass, 75. The total number of candidates examined was 15, of whom 7 passed and 8 failed. The following colleges were represented:

College	Year Grad.	Per Cent.
PASSED		
George Washington University	(1902) 78.2; (1906)	82.9, 84.1
Georgetown University	(1906)	80.2
Howard University	(1908)	75.3
University of Michigan	(1903)	77.9
University of Toronto, Canada	(1895)	84.7
FAILED		
George Washington University, 69.8; (1907) 73.7.	(1907) 24.8,* 47.9, 70.1; (1908)	
Howard University	(1907)	57.8, 62.7, 69.

* Completed three papers only.

Connecticut March Report

Dr. Charles A. Tuttle, secretary of the Connecticut Medical Examining Board, reports the written examination held at New Haven, March 9-10, 1909. The number of subjects examined in was 12; total number of questions asked, 70; percentage required to pass, 75. The total number of candidates examined was 13, of whom 8 passed and 5 failed. The following colleges were represented:

College	Year Grad.	Per Cent.
PASSED		
Yale Medical School	(1906)	80.7
Tufts College Medical School	(1902)	78.4
Cornell University Medical College	(1899)	87.2
Long Island College Hospital	(1908)	79.2
University and Bellevue Hospital Medical College	(1907)	75.8
Columbia University College of Physicians and Surgeons	(1906)	78.1
University of Vermont	(1907)	76.8
University of Toronto, Canada	(1904)	84.3
FAILED		
Georgetown University	(1908)	74.3
Maryland Medical College	(1908)	71.6
Baltimore Medical College	(1908)	74.1
Western Pennsylvania Medical College	(1907)	64.4
University of Naples, Italy	(1905)	72.6

Medicolegal

Habitual Drunkard's Case Treated Like One of Permanent Personal Injury

The Supreme Court of Nebraska holds, in Acken vs. Tinglehoff and others, that in an action by a wife against licensed liquor dealers to recover damages for non-support by her husband, who was made an habitual drunkard either wholly or partially through the defendants' traffic, it is competent to introduce the Carlisle Tables of Mortality as evidence of the husband's expectancy of life when a sufficient foundation therefor is laid by evidence tending to show that the husband's habitual inebriety has permanently impaired his earning capacity. It is said in the opinion in the case that evidence of expectancy is usually introduced in damage cases for personal injuries or death. The case under consideration is not, strictly speaking, a personal injury case. It is permitted by the statute and did not exist at common law. It is, however, very similar to a personal injury case in so far at least as the amount of recovery is measured by the same rules. Every reason for permitting such evidence of expectancy in personal injury cases exists in this case. While it is true that drunkards may reform, yet the probability of any particular one doing so is a matter for argument, and not for presumption. It is improbable that any person could have special knowledge which would permit him to testify to a certainty as to whether or not an habitual drunkard would reform or be restored to health, regain his natural faculties, and perform the duty of supporting his family. Such testimony would not strengthen the plaintiff's case. It is for the jury to determine from the evidence of the husband's habits and condition whether his failure to support the family will be permanent.

Incompetent Evidence to Discredit Physician as Witness—Damages for Injury

The Court of Civil Appeals of Texas says, in Missouri, Kansas & Texas Railway Co. of Texas vs. Bailey, a personal injury case brought by the latter party, that a physician testified in behalf of the plaintiff that he had treated him since soon after he was injured, that he had made several examinations of him, and that his opinion was that the plaintiff's left limb was permanently paralyzed. On cross-examination the witness testified that he remembered a man named Lynch, and that he had stated as a witness on the trial of a suit brought by the said Lynch against this same company that in his opinion the said Lynch was paralyzed and would never be able to walk again. The company then offered to prove by another witness that he saw Lynch about three weeks before the trial of the present case, and that he was able to walk without the assistance of any crutch and practically as well as he ever could. This testimony was objected to, and it is held that there was no error in excluding it.

It was not competent, the court thinks, to discredit the physician, who had testified as an expert, in the manner attempted. It is a well-settled general rule that all questions tending to raise collateral issues and all evidence offered in support of such issues ought to be rejected. It is said that one of the reasons why a collateral question should not be entered in the trial of a case is that it would add to the trial so much consumption of time and confusion of issues as to be intolerable. The admission of the testimony excluded in this case would have introduced into the case a collateral matter, the investigation of which would have unduly prolonged, it would seem, the trial and doubtless resulted in a confusion of real issues.

Again, while particular instances of a lack of qualification, wherever a special qualification is required for testimony to a certain fact may be brought out by questions to the witness himself, yet particular instances of mistake or error indicating a lack of expertness are, ordinarily, not provable by extrinsic evidence. This seems to be specially true of questions relating to prior instances out of court. Putting it in the strongest light for the company, it would seem that proof of such particular instances by other witnesses is only admissible at the discretion of the court when it deems it useful.

Nor does the court think that a verdict in the plaintiff's favor for $20,000 damages was excessive, the evidence showing that he was 35 years of age at the time he was injured; that he had been an industrious and capable man who was earning $50 a month at the time of his injury; that he was knocked unconscious and had been confined to his bed, not able to walk a step, from the date of his injury up to the date of the trial, a period of about nine months; that he was paralyzed and had suffered continuously; that his condition was permanent; and that he would probably continue so to suffer.

Construction of Portions of Wisconsin Medical Practice Act and of Terms "Physician" and "Reputable"

The Supreme Court of Wisconsin says, in the case of State vs. Schmidt, that chapter 264 of the Wisconsin Laws of 1897 provided for a state board of medical examiners and required all beginning to practice medicine or surgery in Wisconsin after July 1, 1897, to first procure a certificate of qualification from such board. It did not deal in any respect with members of the profession in actual practice in Wisconsin, on such date.

Chapter 87 of the Laws of 1899 enlarged the scope of the board's jurisdiction by making the privilege of every person who was a resident practicing physician in Wisconsin July 1, 1897, to continue in such practice contingent on his obtaining a certificate of qualification from the board within a prescribed time and becoming duly registered with the board. The law prescribed, as a condition of granting the certificate, that the application should be made therefor and the applicant submit in support thereof his "diploma or other credential or evidence of qualification" and be a "reputable resident physician or surgeon of good moral character who was on the first day of July, 1897, in the actual practice of medicine or surgery in the state of Wisconsin." In mandatory language the board was required, on such application being made by a person competent, as provided in the law, to make it, and supported by the evidence of qualifications prescribed —to grant the registration and certificate.

Chapter 422 of the Laws of 1905 gave the circuit courts of Wisconsin jurisdiction to annul any certificate obtained as aforesaid, in case of the issuance thereof resulting from error of the board or fraud or perjury.

From the foregoing it will be seen that the board of medical examiners in acting on the defendant's application, was required to decide, by the exercise of quasi (semi) judicial authority, first, whether the defendant was, July 1, 1897, a resident physician or surgeon and actually engaged in prac-

tice in Wisconsin; second, whether he was, at the time of the application, a reputable physician or surgeon; third, whether he was a man of good moral character.

The board was left free to prescribe its own rules of procedure, governed only by the requirement that the applicant should submit the evidence of his qualification. That, in the broadest sense the language can be reasonably viewed, related to all of the three matters of fact mentioned. It might possibly be held more restrictive, but for the purposes of this case the broader view is taken to be the correct one.

Manifestly, the Legislature conceived that it was dealing with the entire class of persons known as physicians, in the broadest sense of the term, not in any narrow sense, which would favor those claiming, and perhaps entitled to superior distinction. The purpose was very far from that of creating a monopoly in favor of special schools of medicine. The term was evidently used in its proper sense, that of including any person of whatever school, and whether belonging to any known school, engaged in good faith, in treating human ills by any remedy, or remedies, however simple, so as to be known among the people as a physician.

What has been said as to the legislative meaning is so manifest, in the court's judgment, from the very fact alone that it was dealing with an existing condition which it did not intend to disturb except to the extent of weeding out disreputable and immoral characters. But that is placed beyond all reasonable doubt by the fact that the law of 1897, to which the law of 1899 referred, expressly defined the term, making it include every person "who shall for a fee, prescribe drugs or other medical or surgical treatment for the cure or relief of any wound, fracture, bodily injury, infirmity or disease."

The court must also appreciate that the act of 1905 did not contemplate a new trial of the questions presented to the board. Aside from whether it was imposed on by fraud or perjury, the scope of the trial was limited, by the act, to the question of whether the board committed error. Just what the legislature intended by the use, unexplained, of the word "error" may admit of some doubt, but the court is constrained to believe that the term was used in the sense it is ordinarily understood as applied to trials in courts before juries. That is, while, aside from jurisdictional errors in the limited sense of such as would render the decision void, it is confined to such absence of evidence in support of the board's decision that, in no reasonable view thereof, could its decision be justified, or prejudicial refusals to admit or exclude evidence, or other prejudicial misapprehensions of law; error which might properly be denominated "jurisdictional," as regards trials before quasi judicial bodies—errors which, in the general sense are purely judicial, in the sense that a decision is binding on all concerned, till set aside by some proper proceedings for that purpose.

The board was not in error in its construction of the term "physician," as it was evident that it did not understand that term, as applied to persons practicing the healing art July 1, 1897, referred only to such as possessed that technical knowledge of the human system and knowledge of drugs and other remedies and how to administer them, commonly supposed to be possessed by members in good standing of the great schools of medicine.

Did the board commit error as to the meaning of the word "reputable?" Here was the state's bone of contention. The claim is not new, that a physician or surgeon, however learned in fact, is disreputable, unless he belongs to some incorporated medical society or holds a diploma from some reputable medical school. This court has said, and other courts have said, that the term "reputable" as used in the statute has no such legal and technical meaning as counsel claimed for it. Therefore, until the legislature shall have unmistakably used it in such sense, no such meaning can be given thereto by judicial construction.

The word "reputable" has a plain ordinary meaning having reference to general character for some honorable work. Whether one is reputable or not, means whether he is worthy of praise or not in the particular line under consideration. If one is regarded as honorable and praiseworthy as a member of the medical profession, of whatever school, or whether classed with any particular school, by reason of the character of his work and his conduct professionally, he satisfies the statutory essentials of reputability as to his particular line, though he may never have crossed the threshold of a medical college or been a member of any medical society.

Whether as a matter of fact, as an original matter, the defendant possessed the qualifications one would expect to characterize a physician or not, as before indicated, was not for the Circuit Court, nor is it for this court to decide. The board had full authority to inquire into the matter.

Current Medical Literature

AMERICAN

Titles marked with an asterisk (*) are abstracted below.

New York Medical Journal

April 3

1 *Theories and Problems of Heredity (continued). J. Wright, New York.
2 Exophthalmic Goiter. C. A. McWilliams, New York.
3 The Third Tonsil. H. Parrish, Philadelphia.
4 *Cesarean Section. W. L. Harris, Providence, R. I.
5 *Id. B. Van Sweringen, Fort Wayne, Ind.
6 Nature and Treatment of Neurasthenia. S. T. Rucker, Memphis, Tenn.
7 Diagnosis of Diseases of the Kidney. R. H. Greene, New York.
8 Two Unusual Cases of Typhoid. F. W. White, Philadelphia.

1. Theories and Problems of Heredity.—In this, his third paper, Wright discusses the affiliation of cancer with the fundamental theories of heredity.

4. Cesarean Section.—Harris discusses the various measures for emptying the uterus when the pelvis is deformed. Craniotomy he dismisses unless the child is dead. Symphyseotomy and pubiotomy do not insure adequate room, are as difficult of performance as Cesarean section, convalescence is slower, and the mortality for mother and child is high. The induction of premature labor might solve the difficulty if we could be sure of the right time; but if brought about too soon, we imperil the infant's life; if we wait too long we have to face the original danger of a difficult labor. The secret of success in Cesarean section lies in operating at the opportune moment. Postponement until after the high forceps has proved useless, results in an exhausted patient and consequent impediment to success. The harm wrought by the forceps is beginning to be recognized. Harris gives the indications for Cesarean section as follows:

1. When the conjugate measurement of the pelvis is below 3½ inches.
2. When the presence of a pelvic, cervical, or vaginal tumor renders delivery impossible.
3. Central placenta praevia.
4. When, with a conjugate measurement below 3½ inches, the forceps has been applied and no advancement can be detected after ten minutes.
5. When a woman has had one stillborn child of moderate size following the application of forceps.
6. When a woman has lost two or three children from accidents during labor.
7. In cases of puerperal eclampsia at full term, Cesarean section is preferable to cervical dilatation followed by version or high forceps.
8. Several cases have been reported in which the complications following ventral fixation have made Cesarean section necessary.
9. The following pelvic deformities, dwarf pelvis, ankylosed pelvis, coxalgic pelvis, kyphotic and oblique pelvis, require the Cesarean operation.

He describes the technic. He has done the operation 21 times, 1 case including the delivery of twins, and 2 patients having been delivered twice each by Cesarean section, with the following results: All the mothers are living, and all the children but 3, 2 of whom died a few minutes after birth, and one a few days later. The 21 mothers had, previous to their operations, lost 39 children, and to-day there are in his state enjoying good health, 19 boys and girls varying in age from 3 months to 6 years, who, in his opinion, owe their existence to this operation. He insists that the antipathy to the Cesarean section must disappear.

5. **Idem.**—Van Sweringen reports three cases subjected to Cesarean section during the last ten months, respectively for the following reasons: (1) Adhesion of uterus to abdominal wall, consequent on appendicitis during pregnancy; (2) central placenta prævia; (3) contracted pelvis resembling male formation. In all cases mothers and babies are alive and well. He urges the more frequent employment of Cesarean section as a conservative measure for both mother and child. He discusses the indications given in the cases above mentioned, and says of adhesions between the uterus and abdominal wall following drainage after appendicular inflammation, that it is an increasingly common indication for this operation.

Medical Record, New York

April 3

9 *New Method of Recognizing Ulcers of the Upper Digestive Tract and of Localizing Them. M. Einhorn, New York.
10 *Postural Lung Dulness; Its Value in Diagnosis and Treatment. A. Abrams, San Francisco.
11 Anaphylaxis and Immunity. E. F. McCampbell, Columbus, O.
12 Diagnosis and Treatment of Internal Hemorrhage and of Pulmonary Hemorrhage as a Complication of Tuberculosis. T. F. Smith, Washington, D. C.
13 Renal Tuberculosis. E. Quick, Appleton, Wis.
14 *Is Gastrointestinal Autointoxication a Disease, or only a Symptom? O. L. Mulot, Brooklyn, N. Y.

9. **Ulcers of the Upper Digestive Tract.**—Einhorn describes two methods of localizing and obtaining information concerning ulcers of the stomach or upper duodenum. The first method consists of a duodenal bucket, in gelatin capsule, attached to a silk thread long enough to allow the bucket, when swallowed at night, to pass for a distance of 75 centimeters from the lips. The external end is fastened to the shirt. The apparatus is removed before food is taken in the morning, and in the presence of an ulcer or bleeding growth a blood stain will be found on the silk where it passes over the ulcer of the stomach or duodenum. The distance of the staining on the thread indicates the position and to some extent the size of the ulcer. Naturally, ulcers of the fundus and greater curvature can not be detected in this way. The other method consists of an India-rubber balloon, covered by a silk gauze bag somewhat stomach-shaped. These are attached to the end of a tube containing a stopcock and stylet. The balloon and gauze are wrapped round the end of the tube and passed into the stomach. The balloon is then inflated by means of a bulb connected with the free end of the tube, and the gauze bag thus comes into contact with the walls of the stomach and receives an impression from the surface of an ulcer similar to that found on a silk thread. Einhorn calls this apparatus the "gastric stamper." This latter method is more difficult of performance and can be done only in patients who are used to lavage and in whom that procedure is not contraindicated. The article is illustrated.

10. **Postural Lung Dulness.**—Abrams refers to the "atelectatic zones," which are circumscribed areas of pulmonary atelectasis dissociated with any demonstrable lesions, varying in size from that of a 25-cent piece to that of a dollar, or even larger, and disappearing after a deep inspiration or on application of the lung reflex test. These zones, even in normal conditions, often yield a dulness or flatness on percussion, and are frequently mistaken for lung consolidation. They bear a definite relation to the points of election and paths of distribution of the lesions in chronic pulmonary tuberculosis. Sometimes the lungs are hyper-resonant, presenting essentially the signs of emphysema consequent on a pulmonary neurosis termed by the author "acute lung dilatation." These two conditions will disappear on cocainization of the nasal mucosa. Lung dulness is influenced by posture. Abrams describes the changes in dulness brought about by different postures, and says that postural dulness as a pathologic phenomenon is often found. It may be distinguished from that of atelectasis by the fact that the latter is usually circumscribed and may be dispelled by a series of forced inspirations, by rubbing the skin over the area of dulness to provoke the lung reflex of dilatation, and by the cocain test. Postural dulness is usually diffused, and can not be dispelled by these means, but disappears by complete change of posture. Abrams regards postural dulness as dependent on the blood normally present in the blood vessels of the lungs, which is influenced by gravity. It is most pronounced in passive congestion of the lung and is noticed slightly in pulmonary tuberculosis. He discusses Grocco's sign. He considers postural treatment of the lungs justified.

14. **Gastrointestinal Autointoxication.**—Mulot discusses the idea that gastrointestinal autointoxication is due to the intestinal bacteria, and urges that in that case we should all have it. He thinks it likely to be due to deficient quantity or defective quality of the bile. The cause of liver insufficiency is at present unknown.

Boston Medical and Surgical Journal

April 1

15 *Recent Progress in Treatment of Various Conditions Called Rheumatism. R. B. Osgood, Boston.
16 *Infection with the *Bacillus Aërogenes Capsulatus*, Following Abortion. E. B. Young and L. J. Rhea, Boston.
17 Tuberculous Pericarditis. C. R. Metcalf, Tewksbury, Mass.
18 The Wassermann Reaction in Syphilis and Other Diseases. R. I. Lee and W. Whittemore, Boston.
19 *Modern Ideas on the Teaching of Therapeutics and Pharmacodynamics. M. V. Tyrode, Boston.

15. **Rheumatism.**—Osgood reviews the phlegmasia theory of rheumatism during which blood letting was advocated, the lactic acid, uric acid and infective theories. He discusses the progress in treatment with drugs, serum, external or mechanical treatment, and palliative methods, and concludes as follows: We may conclude that acute articular rheumatism has not been conclusively shown on purely scientific grounds to be a specific disease in spite of the very general clinical belief that such a disease exists as an entity; that the salicyl compounds, while unquestioned controllers of pain, have not been scientifically proved to control or even shorten the course of the disease; that recent progress in treatment has been made along the lines suggested by the conception of the infective nature of the disease called acute rheumatic fever; that the tendency of this treatment is to place less reliance on drugs and more reliance on those measures calculated to combat the infection and conserve those natural forces within the body whose protective activities are called forth by the appropriate disturbance. Of the chronic types of rheumatism, without attempting any classification, he says that we may with almost common consent speak of a group of conditions which in nearly all their manifestations suggest an infectious origin —gonorrheal rheumatism and the chronic joint involvements following gynecologic infections, acute rheumatic fever, grippe, pneumonia, tonsillitis, typhoid and other diseases. Certain other chronic types in which bacteriologic research thus far has been futile present such a different clinical picture and manifest changes of such different chronology and sequence as to suggest metabolic changes only directly. He describes the attack at present being made on the whole class of chronic joint diseases, and reviews the status of treatment in infectious arthritis and the nature and treatment of the chronic forms probably not infectious. Among conditions heretofore called rheumatism, he describes lesions of various bursæ, lame back, lumbago, sciatica, sacroiliac disease, and those indefinite muscular articular pains which are often fleeting and productive of no definite lesion, other than the evidence of joint strain. He feels confident that they will be found to be closely related to occupation neuroses or to attitude, poise and balance.

16. **Puerperal Infection with Bacillus Aërogenes Capsulatus.**—Young and Rhea report two cases in which abortion was followed by the very rare form of puerperal infection with the *Bacillus aërogenes capsulatus*. The first case is noteworthy for the fact that a pure culture of the gas bacillus was obtained from the circulating blood during life. Clinically, the second case is interesting on account of the extraordinary extent of the cutaneous emphysema during life, and the high leucocyte count, 126,400; also in view of the possibility of an autoinfection, as the patient persistently denied any vaginal examination or attempt at criminal abortion. The skin of both patients was of a deep copper color, with spots of dark

purple, analogous to the appearance sometimes seen after the long use of hot applications. This characteristic appearance has not been noted previously, so far as is known.

19. **Teaching of Therapeutics.**—Tyrode briefly reviews the history of opinion in regard to therapeutics, which brought the profession to a state of therapeutic nihilism, and notes with satisfaction a reaction reinstating therapeutics. The treatment of disease can be divided into four great fields: the physical, including surgery, hydrotherapy, massage, gymnastics, *x*-rays, Finsen rays and radium; the psychical, dealing with mental suggestion in the waking, hypnoidal or hypnotic states; the dietetic; and the chemical, or medicinal, which deals with drugs in the old sense of the word and with organ preparations, serums and antitoxins. In view of these facts, an adequate course in therapeutics at present should devote a large part of its time to chemical agents, without neglecting the mechanical, dietetic and psychical. The courses in chemical or medicinal agents should consist of one on materia medica, where the chemical and psychical properties are studied, and another in pharmacodynamics, or experimental therapeutics, where the action of these bodies is investigated. Exclusive of surgery, therapeutics other than medicinal should be taught by separate and practical courses. There should be a general course on therapeutics, besides the practical therapeutics taught in all special clinics. There should be a special organization of the men teaching therapeutics in its different branches, so that they might meet frequently and agree on plans for thorough cooperation.

Lancet-Clinic, Cincinnati

April 3

20 When Should the Prostate be Removed? E. O. Smith, Cincinnati.
21 Appendicitis with Abscess Formation, Based on a Study of 48 Cases. H. J. Whitacre, Cincinnati.
22 Cardiac Complications of Rheumatic Fever. A. A. Robinson, Ogden, Utah.

Northwestern Lancet, Minneapolis

April 1

23 Record of First Year's Work at the Minnesota State Sanatorium. W. J. Marcley, Walker, Minn.
24 Lacerations of the Parturient Canal: Their Prevention and Immediate Treatment. D. L. Rundlett, Sioux Falls, S. D.
25 *Acute Anterior Poliomyelitis. H. G. Franzen, Minneapolis.
26 Spina Bifida. A. E. Hedback, Minneapolis.
27 A Common Nervous Disease. H. Sneve, St. Paul.

25. **Anterior Poliomyelitis.**—Franzen reports a case having the unusual features of perfect anesthesia, absence of preliminary fever, and persistent coldness of the skin. Electricity should not be used in the early stages of this disease, as Franzen has noted positive harm from it in acute inflammation.

Surgery, Gynecology and Obstetrics, Chicago

March

28 Renal Diagnosis. C. H. Chetwood, New York.
29 Tuberculosis of the Cervical Lymph Nodes: 275 Cases Treated by Radical Extirpation. C. N. Dowd, New York.
30 *Mortality in 1,000 Operations for Goiter. C. H. Mayo, Rochester, Minn.
31 Hysterectomy. W. D. Hamilton, Columbus, O.
32 *Twin Tubal Pregnancy and Bilateral Tubal Pregnancy. L. P. McCalla, Boise, Idaho.
33 *Surgery of the Lungs Under Positive and Negative Pressure. S. Robinson and G. A. Leland, Boston.
34 Primary Carcinoma of the Fallopian Tube. C. C. Norris, Philadelphia.
35 Thyroidectomy for Exophthalmic Goiter. A. H. Ferguson, Chicago.
36 An Anatomic Anomaly of Importance in Gastrojejunostomy. C. G. Levison, San Francisco.
37 *Resection of the Bowel. J. S. Horsley, Richmond, Va.
38 *Points in the Surgery of the Bile Tracts. C. U. Collins, Peoria, Ill.
39 Uterine and Bladder Displacements and the Best Operations for Their Cure. I. S. Stone, Washington, D. C.
40 An Atypical Matas Operation for Femoral Aneurism. J. M. Walnwright, Scranton, Pa.
41 A New, Quick, and Practical Surgical Knot. E. P. Quain, Bismarck, N. D.

30. **Mortality in Goiter Operations.**—Mayo says that in conquering serious diseases by surgical means, the operation itself must be as free from mortality as possible. As surgical technic and sound judgment render operating comparatively safe, serious procedures are chosen as operations of expediency and the operative mortality becomes lower, the disability is reduced, and the permanency of cure is increased. Goiter is still considered a rare disease in this country, and serious only when operated on. The mortality from early operations was high for the number operated on, as the operations were performed from great necessity after the delay of long and oft-changed medication. Operations on colloid, simple or diffuse adenomata, as a rule, involve slight risk to life. In early surgical work in hyperthyroidism 25 per cent. mortality was considered up to average; with better judgment and more careful preparation of the patient, or with graduated operations, the mortality has been reduced to 3 or 4 per cent. Mayo has in his series of 1,000 operations 574 cases of simple, colloid or diffuse adenomata, including encapsulated goiter, treated by extirpation or enucleation, with four deaths; 18 malignant, with one death; 97 cases of hyperthyroidism treated by double ligation of the superior thyroid arteries and veins, with one death, and 15 cases with single ligation, with no deaths. There were 295 cases in which more or less of the gland was removed, with 18 deaths, 7 of which were in the first 46 cases; 1 ligation, shock; 15 hyperthyroidism; 2 embolism. Ether was preceded by atropin, 1/120, morphin 1/6. Over twenty operations were done under cocain local anesthesia. Goiter of long standing may become malignant; surgeons, therefore, should encourage early operations in sudden growths of stationary glands.

32. **Twin Tubal Pregnancy.**—McCalla considers that the best specification would be as follows:

1. Twin tubal pregnancy, or tubal twin pregnancy; one tube contains two embryos.
2. Bilateral tubal pregnancy; each tube contains an embryo.
3. Multiple tubal pregnancy; one tube contains one embryo and the other two or more.
4. Multiple tubal pregnancy; one tube contains no embryo, and the pregnant tube contains three or more embryos.

He tabulates 25 cases of the first, and 36 cases of the second variety, and adds 1 case of the second from his own practice. He discusses the diagnosis and operative treatment. He is convinced that the operator's individual experience and fitness should determine the time and route for operation. An abdominal operation may give more direct shock, which, to a woman who is already all but dead from shock, is a bad feature; but for one to attempt to operate by the vaginal route who is unfamiliar with the work, might give more shock to the woman than operation by the abdominal route, with which he is thoroughly conversant. McCalla is convinced, however, that to the operator familiar with vaginal work on the tubes and ovaries, that route will be the operation of choice. It gives less shock, it should require less time to do the work, and the blood clots left in the abdomen, so long as no sepsis has taken place, will do far less harm than a protracted effort to remove them by a long abdominal operation. Should the abdominal route be the operation of choice, very little time should be spent in removing the blood from the peritoneal cavity in a woman almost moribund from shock; let it alone. In this, as well as in severe cases of peritonitis, the application of the maxim applies: "Get in quick and get out quicker," provided you do your work well, and close the bleeding vessels and remove only the large blood clots by a rapid movement of the hand sweeping around the abdominal cavity. Devote time to restoring the lost vital forces. Give infusion of blood by direct transmission if it is possible to get a healthy donor, or by saline solution if not prepared to use the other. In this kind of case, let all efforts be to save the woman, and not to do any special kind of operation or to make too careful a toilet of the peritoneum.

33. **Surgery of the Lungs.**—Robinson and Leland discuss the question of positive or negative pressure in lung surgery and review the different methods of supplying the four elements necessary to positive pressure apparatus, namely air compression, an anesthetizing segment arc, a device for introducing these into the respiratory tract, and a means of varying the resistance to expiration. They conclude:

1. The positive-pressure method, as proved by experiments, has no more pathologic effect on the circulatory and respiratory functions than negative pressure.
2. The clinical operative results under positive pressure have justified its employment.

3. It possesses many advantages over the negative-pressure method.

4. Air compression should be excessive rather than insufficient, and is most conveniently supplied directly from a small rotary air-pump.

5. The anesthetizing segment should consist of an ether bottle with side-tracking connections, and permanent joints arranged in the simplest possible manner. Rectal anesthesia, when used, dispenses with this portion of the apparatus.

6. A positive-pressure apparatus should be supplied with a face mask which, in accidental pleural punctures with subsequent dyspnea, will amply suffice for emergency use. In most thoracic operations, it could be removed, in case of vomiting, without danger.

7. For extensive resections of the chest wall in the absence of adhesions, when the permanence of the air compression is essential, peroral intubation should eventually become the method of choice. A tube for the human has not yet been perfected.

8. For animal experimentation, masking and intubation are unquestionably the methods of choice.

9. The water bottle is the preferred device for resistance, because always available and regulated with ease.

10. All forms of rhythmical artificial respiratory devices are too elaborate for universal surgical application.

11. Afferent air of sufficient volume and pressure, with low resistance to support the normal respiratory movements, by providing air exchange and preventing collapse, is the fundamental principle of positive pressure.

The authors next describe a series of eighteen animal operations with experiments, which show that while positive pressure is not a *sine qua non* for preservation of life in the rabbit during opening of the pleural cavity, it is fatal in the dark. Human individuals may possibly vary, some resembling one, some the other.

37. Abstracted in THE JOURNAL, Jan. 16, 1909, p. 241.

38. Abstracted in THE JOURNAL, Jan. 30, 1909, p. 413.

Archives of Internal Medicine, Chicago

March

42 *Nuclear Particles in the Erythrocytes. R. S. Morris, Baltimore.
43 *Specific Chemical Therapy of the Trypanosomiases and Spirilloses. B. T. Terry, New York.
44 The Agglutinating Power of the Blood Serum of Tuberculous Patients. P. Courmont, Lyons, France.
45 *Effect of Adrenalin on Intestinal Hemorrhage. C. J. Wiggers, Detroit.
46 *The Therapy of Diabetes Mellitus. W. Falta, Vienna, Austria.
47 Production of Morbid Changes in the Blood Vessels of the Rabbit by Alcohol. W. de B. MacNider, Chapel Hill, N. C.

42. **The Erythrocytes.**—Morris says that evidence of regeneration of the blood is of great value, not only in the diagnosis, but also in the prognosis and treatment of anemias. In addition to the ordinary signs he refers to the presence, which, with certain exceptions he has constantly found, of a few very characteristic nuclear particles in specimens of cat's blood, fixed and stained in the usual manner. Nuclear particles have been found in full grown animals only during active regeneration of the blood, that is, after severe or repeated hemorrhages, etc. They have been found in the blood of embryonic animals and of the human embryo, and in the most varied conditions in some human adults, in whose blood other evidences of regeneration were present. As yet, Morris has not found them in normal blood, but has observed them in nine cases of pernicious anemia, in two cases of anemia in infants, in two cases of secondary anemia, in three of chronic myeloid anemia, and in one of anemia after splenectomy. They were also present in smears of the bone marrow in two cases of pernicious anemia. Since they are found in bone marrow, and are almost always associated with other evidences of regeneration of the blood, he thinks that nuclear particles may safely be considered a sign of regeneration. Morris describes the method of staining to demonstrate them, and discusses the relations and differences between them and Howell's bodies

43. **Trypanosomiases and Spirilloses.**—Terry discusses trypanosomiases in general and reviews their therapy since 1904. He describes four groups of medicaments: (1) The benzidine dyes; (2) the basic tryphenyl methane; (3) arsenical compounds (sleeping sickness); (4) antimony compounds. He discusses the drawbacks and dangers of treatment, the recently discovered resistant strains, the natural variability of trypanosomes and the combined treatment by the simultaneous or alternate use of two or more medicaments or methods of administration. He next discusses the spirilloses, (1) of fowls (South America); (2) of African tick fever; (3) of European relapsing fever; (4) syphilis.

45. **Adrenalin in Intestinal Hemorrhage.**—Wiggers reports in detail a careful study of this subject, and draws the following conclusions:

1. Large doses of adrenalin (from 0.05 to 0.1 mg.) cause a short preliminary increase in hemorrhage, followed quickly by a decrease or cessation of bleeding. On account of the great preliminary loss of blood they are always contraindicated.

2. Small doses of adrenalin (from 0.1 to 0.25 mg.) cause little or no preliminary increase, but shorten the course of hemorrhage. As they save the red blood cells in every way, they are therapeutically desirable.

3. The method of introducing adrenalin determines the effect on blood pressure and hemorrhage. No results are obtained by subcutaneous administration. By continuous intravenous injection of weak solutions a slight elevation of pressure can be maintained and hemorrhage be simultaneously checked. This can also be accomplished by intramuscular injections.

4. Adrenalin is not indicated in all intestinal hemorrhages. The condition of the blood pressure is the criterion for its use. In hemorrhages of short duration, when the pressure has not fallen to any extent, a judicious dose of nitrites proves of more benefit than adrenalin. When the bleeding has been profuse, however, and a low pressure already exists it becomes vital that hemorrhage should be checked without further reduction of pressure. Adrenalin finds its use in this field.

5. The use of adrenalin should always be closely followed by blood-pressure observations. A dose sure to be below the safety limit should first be tried and the pressure carefully estimated. If no rise occurs, gradually increasing doses may be injected until a slight elevation of pressure is present, in which case we may be certain that enough has been introduced to affect hemorrhage, and at least no significant preliminary increase has resulted.

46. **Diabetes Mellitus.**—Falta says that we must not seek in the pancreas the sole cause of the disease, and states that a rôle is also played therein by other organs which elaborate internal secretions, and especially by the nervous system. As we are ignorant of the ultimate cause of the metabolic disturbance, a causal therapy is out of the question. Sympathetic therapy seeks in the first instance to combat the most prominent symptom, the excretion of sugar and its results. Theoretically two possibilities exist: (1) To increase the efficiency of carbohydrate metabolism—efforts in this direction so far have shown but slight success; (2) to diminish the requirements, thereby giving the diseased organ or organs the opportunity of recovery. This is the foundation of the dietetic therapy. After a brief discussion of a small group of cases which manifest a marked disease of the pancreas and often require a special therapy, he turns to the disturbances of the carbohydrate metabolism, in which the chief end of dietetic therapy is the depression of glycosuria. He discusses the grounds on which this end is sought and the methods of attaining it. He insists on the value of the oatmeal therapy, first recommended by von Noorden, and describes the method. He defends it against the criticisms of Naunyn and others, and describes its remarkable results, admitting that the cause of the remarkable effect of oatmeal is as yet unknown.

Philippine Journal of Science, Manila

November

48 Precipitin and Complement Fixation Reactions. H. T. Marshal and O. Teague, Manila.
49 Tuberculo-Toxoidin and Immunization Serum. T. Ishigami, Osaka, Japan.
50 A New Intestinal Trematode of Man. P. E. Garrison, Manila.
51 Blastomycosis of the Skin in the Philippines. J. M. Phalen and H. J. Nichols, Manila.
52 Reduction in the Cost of Anti-Cattle-Plague Serum. E. H. Ruediger, Manila.
53 Three Hundred Examinations of Feces for Amebas. R. E. Hoyt, U. S. Navy.
54 Inoculation of Bacterial Vaccines as a Practical Method for Treatment of Bacterial Diseases, Especially Gonococcus Infections. E. R. Whitmore, U. S. Army.
55 Sanitary Conditions and Needs in Provincial Towns. T. W. Jackson, Medical Reserve Corps, Fort McKinley.

Alabama Medical Journal, Birmingham

March

56 Pathology and Etiology of Diabetes Mellitus. J. S. McLester, Birmingham.
57 *Serodiagnosis of Syphilis and its Clinical Value. W. J. Butler, Chicago
58 Complications of Pneumonia. J. B. Cooper, Birmingham.
59 Correct Method of Examination of the Rectum and the Diagnosis of Hypertrophied Valves. J. C. Walter, Birmingham.
60 Treatment of Diphtheria, with Special Reference to Intubation and Tracheotomy. J. E. Seay, Pratt City.
61 Appendicostomy. A. Hayes, Birmingham.

57. Published in the *Illinois Medical Journal*, December, 1908, the *New York Medical Journal*, Jan. 30, 1909, and the *Chicago Medical Recorder*, March, 1909, and abstracted in THE JOURNAL, Feb. 13, 1909, p. 588.

Archives of Pediatrics, New York

March

62 *Case of Congenital Malformation of the Esophagus. J. P. C. Griffith and R. S. Lavenson, Philadelphia.
63 *Spasmodic Stricture of the Esophagus. S. S. Adams, Washington, D. C.
64 *Transmission and Progress of Tuberculosis in Children Through Family Association. C. Floyd and H. L. Bowditch, Boston.
65 Artificial Feeding of Infants. J. Levy, Newark, N. J.
66 Leucocytes in Pulmonary Diseases of Children. I. S. Wile, New York.

62, 63. Abstracted in THE JOURNAL, July 11, 1908, p. 155.

64. Abstracted in THE JOURNAL, Oct. 17, 1908, p. 1366.

California State Journal of Medicine, San Francisco

March

67 Review of the Work Done in the Anatomic Department of Cooper Medical College. F. E. Blaisdell, San Francisco.
68 *Tobacco Amblyopia (from Cigars) in a Woman. W. S. Franklin, San Francisco.
69 Pyloric Stenosis in the New-Born. H. J. Kreutzmann, San Francisco.
70 The Faucial Tonsils Considered from a Medical and Surgical Standpoint. L. C. Deane, San Francisco.
71 *Tests for Involvement of the Labyrinth in Suppurative Middle-Ear Processes. G. P. Wintermute, Oakland.
72 *The Leukemias and Allied Diseases. H. Harris, San Francisco.
73 The Influence of Climate on Tuberculosis, with Remarks on the Climate of Colfax, Cal. R. A. Peers, Colfax.
74 *Waxed Silk as a Suture. C. E. Thompson, Dunsmuir.

68. **Tobacco Amblyopia.**—Franklin records the case of a Swedish woman, single, aged 52, with tobacco amblyopia, who had been in the habit of smoking from six to eight domestic cigars daily. He discusses the pathologic changes in the optic nerve due to tobacco, which are identical with those caused by alcohol or by the mixed intoxication of alcohol and tobacco. No clinical differentiation is possible between them. In this case, however, Franklin believes the woman's denial of alcohol. He quotes Martin's opinion that in tobacco cases the pupil is contracted, and in alcohol cases dilated, but in the author's case the pupil was moderately dilated. The excess of cases in men is due, not to any predisposition, but to the greater numbers of tobacco and alcohol users among them. In women the amblyopia is generally of the mixed form, but Franklin considers his case as one of pure nicotine neuritis. All forms of tobacco use can induce the neuritis. He discusses the varieties of tobacco and their nicotin content. The diagnosis is made by the reduced vision, the paleness of the temporal quadrant of the disc, and the central scotomata. The latter are in the beginning only relative for colors, then for form, and vary toward all degrees of the absolute, depending on the stage of the neuritis. In a large number of cases the complete stopping of nicotin will effect a cure.

71. **Tests of Labyrinth Involvement in Otitis Media.**—Wintermute describes in detail the tests devised by Barany of Vienna, by means of which the degree of labyrinth involvement may be ascertained in suppurative otitis media and mastoid conditions. These tests are based on the normal reflex reactions of the semicircular canals in producing nystagmus. If the reactions are normal, labyrinth involvement is ruled out; if they are impaired, lost, heightened, or abnormally produced, the condition of the organ of hearing and the objective symptoms may be accurately ascertained. In Barany's tests, the movement of the endolymph is obtained by turning the patient in a revolving chair. As it is impossible, however, to measure the nystagmus while the patient is being revolved, the chair is brought to a standstill after being revolved ten times; the endolymph, following the law of a body in motion remaining in motion is circulating in the direction of the revolutions—toward the right. The nystagmus is to the left, and the patient being stationary the duration of the reflex is timed with a stop-watch from the instant of stopping the revolutions to the time of the cessation of the reflex movement. When the horizontal canal is tested the resulting nystagmus is horizontal. By bringing the patient's chin down and flexing the head forward at right angles, the anterior vertical canals are brought into the plane of the centrifugal force, and the endolymphatic movements take place in them, the horizontal and vertical canals being unaffected. The nystagmus from the anterior vertical canal is rotary, corresponding to the wheel-like motion of the eye, and in direction, follows the law of being contrary to the endolymphatic movement. By bending the patient's head sharply over either shoulder and revolving him in a similar manner the posterior vertical canals receive the centrifugal impact and the resulting reflex is a vertical up and down nystagmus. By successively changing the position of the head in this way, all the canals may be tested and the results show that each canal produces the movement in its own plane. Wintermute also describes the caloric nystagmus test and states that with a normal labyrinth the patient responds with a rotary nystagmus; if cold be used on the right side there is nystagmus to the left, while the reverse is the case if heat is used. If the middle ear be filled with a mass of cholesteatoma or polyps, the caloric change may not reach the canal and there is no reaction.

72. **The Leukemias.**—Harris attempts to prove that the following diseases are essentially malignant in their nature: Lymphosarcoma, leukosarcoma, chronic lymphocytic leukemia, chloroma, Hodgkins' disease, and other forms of pseudoleukemia, chronic myelocytic leukemia and myeloma. Some show an increase of various white cells in the blood and this impression of increased leukocytosis is dominant in the minds of most physicians. Harris tries to show that the importance of the blood picture is overaccentuated and that as ordinarily accepted it is not pathognomonic, but rather that of a biologic reaction. He accentuates the statement that the ordinary blood picture of the chronic leukemias as we now understand it has been observed in other conditions, and the converse is likewise true; for leukemia has been repeatedly proved at the bedside and autopsy table minus the usual blood picture.

74. **Waxed Silk.**—Thompson describes his procedure for waxing silk for suture material, and claims for this material the following advantages: Its sterility and the ease of keeping it sterile; the absence of capillary attraction; it does not irritate the tissues; it does not adhere to the tissues, dressings or secretions; it is easily removed; it is easily prepared; it is convenient to carry, easy to thread, and in tying it the knot does not slip so easily as plain silk.

Montreal Medical Journal

March

75 Pathology and Treatment of Diabetes Mellitus, Viewed by the Light of Present-Day Knowledge. F. W. Pavy, London, Eng.
76 Demonstration of the *Spirochæta pallida* from a Mucous Patch of the Conjunctiva. H. McKee, Montreal.
77 Plate for the Relief of Pain in the First Metatarso-Phalangeal Joint. J. A. Nutter, Montreal.
78 Surgical Treatment of Non-Resilient Diverticula of the Bladder. F. M. von Eberts, Montreal.
79 Perforative Appendicitis: Venous Thrombosis, Paratyphoid, Intestinal Obstruction. J. Bell, Montreal.

Southern Medical Journal, Nashville, Tenn.

March

80 Conservative Surgery, Then and Now. F. W. Parham, New Orleans.
81 *Vaginal Hysterectomy for Carcinoma of the Cervix. H. T. Byford, Chicago.
82 *Cancer of the Parotid Gland. G. A. Hendon, Louisville, Ky.
83 Urethral Transplantation. J. D. S. Davis, Birmingham, Ala.
84 *Surgical Treatment of Exophthalmic Goiter. J. R. Wathen, Louisville, Ky.
85 *Rare Forms of Hematoma. J. G. Sherrill, Louisville, Ky.
86 Cesarean Section in Which the Uterus Was Incarcerated in a Ventral Hernia. X. O. Werder, Pittsburg, Pa.
87 Primary Bladder Suture with Special Reference to Suprapubic Cystotomy. L. Frank, Louisville.
88 *Bilateral Polycystic Degeneration of the Kidneys. J. W. Bovee, Washington.
89 Elephantiasis of the Male Genitalia. J. N. Baker, Montgomery, Ala.
90 False Aneurism of the Femoral Artery, Following Typhoid. R. S. Cathcart, Charleston, S. C.

81, 84, 85. Abstracted in THE JOURNAL, Jan. 16, 1909, pp. 242 and 243.

82. **Cancer of the Parotid.**—Hendon reports five cases, in all of which operation was successfully performed, though one patient, aged 71, succumbed within a year.

88. **Polycystic Degeneration of the Kidneys.**—Bovee discusses this subject anatomically, pathologically, microscopically, and also with regard to the symptoms, prognosis and

treatment. The latter, he says, is non-surgical, except in two conditions, first, when the disease is unilateral or is reasonably concluded to be so, and second, when the cysts are so large as to be burdensome in any way. In the former, incision, or possibly nephrectomy, is advisable. If the ureter or other part of the purely waste-bearing portion of the corresponding half of the urinary tract be hopelessly obstructed beyond a period of six weeks the function of the corresponding kidney will be permanently suspended, and nephrectomy is preferable to incision or multiple incisions. But if urine is found to be pouring from both ureters, then nephrectomy should not be done, except in the very exceptional unilateral polycystic kidney. Were it at all apparent that the presence of the disease in one kidney had a tendency to stimulation of its development in the other kidney, he would feel less positive in this matter. In the second condition, puncture or incision seems applicable, whether the disease is unilateral or bilateral. If cystoscopy reveals both ureters to be functionating, then, even though but one kidney is involved, nephrectomy should not be performed, except in the rarest circumstances — such as hemorrhage limited to the affected side.

Dominion Medical Monthly, Toronto

March

91 Stricture of the Urethra. W. Scott, Toronto.
92 Complications of Pulmonary Tuberculosis and Their Treatment. J. K. M. Gordon, Gravenhurst, Ont.

Interstate Medical Journal, St. Louis

March

93 *Dismemberment of Traditional Hysteria: Pithiatism. J. Babinski, Paris.
94 *Anatomy and Surgery of the Hard Palate of the Infant. V. P. Blair, St. Louis.
95 Treatment of Dislocation of the Peroneal Tendons. E. A. Tracy, Boston.
96 Value of Color Photography in the Teaching of Pathology. G. McConnell, St. Louis.

93. This subject was discussed in THE JOURNAL, Aug. 8, 1908, p. 537, and Sept. 12, 1908, p. 929.

94. **Cleft Palate.**—Blair illustrates certain anatomic points, with their surgical bearing, by illustrations of frozen sections, diagrams and plaster casts. He discusses the etiology of cleft palate, and describes Brophy's operation, which he considers the most effectual operation devised. He has found a supplementary wire approximating the alveoli in front to be advantageous. He passes the wires so that they enter the orbit just above its floor, using needles curved to three-fourths of a circle. Personally, Blair sees no reason why repair of the lip should not closely follow closure of the hard palate, thus correcting facial deformity.

Iowa Medical Journal, Des Moines

March

97 Osteomyelitis. E. E. Dunkelberg, Waterloo.
98 The Appendix as a Hernial Content. C. S. James, Centerville.
99 Anesthesia. L. W. Littig, Iowa City.
100 Empyema. I. S. Bigelow, Dubuque.
101 Treatment of Cancer. E. H. Robb, Newton.
102 Hernia. J. H. Maynard, Adair.
103 Medical Progress in 1908. S. R. Klein, Chicago.
104 Urinary Vesical Calculus. J. H. Talboy, Sioux City.

Long Island Medical Journal, Brooklyn

March

105 *Diagnosis, and When to Operate in Ectopic Gestation. J. O. Polak, Brooklyn.
106 Progress in Ophthalmology. J. C. Hancock, Brooklyn.
107 Drug Treatment of Nervous Insomnia and a Comparison of the Recent Hypnotics. E. F. Luhrsen, Brooklyn.
108 *Head Injuries. W. S. Simmons, Brooklyn.
109 A Plea for Simpler Medication. L. P. Hoole, Brooklyn.

105. **Extrauterine Pregnancy.**—Polak describes the signs of rupture, laying particular stress—after the occurrence of severe pain over one or other tubal region or radiating over the entire abdomen or referred to the epigastrium—on extreme sensitiveness of the abdomen, with a diffuse rigidity immediately after rupture, accompanied by small, frequent, and thready pulse, air hunger, sighing respiration and audible yawning. The objects of the operation for ectopic pregnancy are: First, control of hemorrhage, or prevention of recurrence of bleeding by careful ligation; second, removal of the débris incident to the tubal abortion or rupture; third, filling up of the volume of blood current in such a way as to permit Nature to adjust itself to the new condition. He discusses the views of Hunter and others, who have questioned the propriety of operating at once in every case on experimental evidence that bitches whose ovarian arteries had been cut had failed to bleed to death. Polak argues that in the lower animals the conditions are different from what takes place in the human female. He admits that he has never seen a vessel actively bleeding at the time of operation, and also that if the patient were going to bleed to death she would probably be dead before being seen by the surgeon, but there is no way of knowing positively in which case bleeding will stop spontaneously. When the signs show rupture into the broad ligament, with formation of a hematoma, Polak's custom has been to wait. In these cases the uterus is usually markedly displaced to one side or carried up over the pubis by intraligamentous distention. When these findings are definite, the free use of morphin, elevated foot posture, and the maintenance of firm abdominal pressure with sand bags have controlled extensive dissection of the peritoneum and favored clot formation. In the course of from four to seven days, a vaginal incision may be made and drainage established. In all other forms of this accident abdominal incision offers the speediest and safest results. A pulse of 100 or less permits delay, while increased rapidity, fall in blood pressure, or falling hemoglobin percentage, demands prompt section. He describes his technic.

108. **Head Injuries.**—Simmons describes eight cases and discusses the question of fractures of the base of the skull in connection with the decompression operation. His own opinion in the matter is that basal fractures should be left alone if there is, in a reasonable time, some evidence of improvement. If, however, there appears no tendency to recovery or if the symptoms at first, slight or severe, do not improve or decrease in intensity, then he deems it wise to explore the middle fossa on both sides if necessary and thus give these desperate conditions the only aid possible from a surgical standpoint.

University of Pennsylvania Medical Bulletin, Philadelphia

March

110 Charles Darwin, the Man and His Influence. G. A. Piersol, Philadelphia.
111 *Syphilitic Form of Multiple Sclerosis. W. G. Spiller and A. H. Woods, Philadelphia.
112 *Recent Advances in the Physiology of Saliva, Together with Certain Aspects of its Pathology. E. H. Goodman, Philadelphia.
113 Habitual or Recurrent Anterior Dislocation of the Shoulder. J. T. Thomas, Philadelphia.

111. **Syphilitic Multiple Sclerosis.**—Spiller and Woods report a case, with special attention to its pathologic aspect, and deduce the following conclusions:

1. Syphilis, in rare instances, may cause a symptomatology indistinguishable from that of typical multiple sclerosis, and this without the formation of sclerotic plaques, but by the ordinary lesions of syphilis, viz., arteritis and meningitis.

2. Syphilis may produce in the spinal cord sclerotic plaques resembling those of multiple sclerosis, without producing the typical symptoms of this disease. These plaques have not the sharp definition seen in most cases of typical multiple sclerosis, and yet multiple sclerosis may exist without plaques sharply defined from the normal tissue. The syphilitic form of multiple sclerosis presents round-cell infiltration of the pia and thickening of the blood vessels. Thickened vessels with a small amount of perivascular sclerosis will usually be found in certain regions without the formation of plaques, though plaques may be present at other levels of the cord. In some places slight neuroglia proliferation without thickened vessels may be detected, resembling in no way true plaque formation, but appearing more in the nature of slight diffuse secondary degeneration. Gumma also may occur in the brain. Secondary degeneration is more common in the syphilitic type, but does occur rarely in multiple sclerosis. Nerve fibers are not always completely degenerated in the syphilitic plaques. Careful and thorough examination will almost always, if not always, make a diagnosis possible between the lesions of syphilis and those of multiple sclerosis, even though they may have a decided superficial resemblance.

112. **Physiology of the Saliva.**—This paper is essentially a review. It discusses the physiology and the nervous mechanism of salivary secretion, salivary digestion, the pathology of saliva, its diminution and increase. It deserves special commendation for the fact that the twenty-four references given in the bibliography have not been taken at random from other bibliographies and indexes, but are the result of a careful assay of the more than 100 studied by the writer.

Yale Medical Journal, New Haven, Conn.

March

114 *Why is Incipient Pulmonary Tuberculosis so Rarely Recognized? A Study of 150 Cases. H. F. Stoll, Hartford, Conn.
115 *Drainage of the Bladder in the Aged and Infirm. G. P. Harris, Norwich, Conn.

114. Discussed editorially in THE JOURNAL, April 10, p. 1186.

115. **Drainage of the Bladder.**—Harris first describes the anatomy of the bladder and its function, and traces the history of draining it. Cystitis is probably the most common cause for drainage, when associated with thick and inflamed bladder walls and urine loaded with pus, mucus and blood, decomposed and foul smelling. This condition is usually found in elderly patients as a result of enlarged prostate, but in younger persons it may exist as the result of obstruction due to urethral stricture. In either case, free drainage of the bladder should be secured, and the bladder washed out. These cases are never too far advanced for treatment, as frequently one kidney is involved before the other, and if the process can be stopped by washing out the bladder regularly the remaining kidney will be able to carry out the work and the patient may recover. He describes the operation of suprapubic cystotomy.

Old Dominion Journal of Medicine and Surgery, Richmond

March

116 *Myoma and Myosarcoma of the Stomach. J. E. Thompson, Galveston, Tex.
117 Laboratory Methods in the Diagnosis of Typhoid. T. R. Boggs, Baltimore.
118 Acute Intestinal Obstruction. S. H. Watts, Charlottesville, Va.
119 What is Minor Surgery? H. A. Royster, Raleigh, N. C.
120 *Gonorrheal Arthritis with Special Reference to the Knee Joint. W. Moncure, Raleigh, N. C.
121 Tuberculous Anorectal Fistula. E. H. Terrell, Richmond, Va.
122 Principles Underlying the Treatment of Uterine Retroversion and Prolapse. R. L. Payne, Norfolk, Va.
123 Case of Quadruplets. E. T. Hargrave, Norfolk, Va.
124 Pathology and Symptomatology of Pneumonia. A. B. Greiner, Rural Retreat, Va.

116. **Myoma of the Stomach.**—Thompson describes an interesting case and analyzes 62 cases found in the literature, of which 19 were operative, the remainder being found at autopsies or as specimens in pathologic museums. From these cases he draws up the following synthesis: The affection is one of adult life, rare before 30, and more common after 40. No conclusions can be drawn as to sex incidence. Profuse hemorrhages are liable to occur from tumors of a considerable size that project into the lumen of the stomach. Analyses of stomach contents afford no valuable information. Pyloric obstruction was a definite symptom in only 3 cases. A palpable abdominal tumor was definite in 18 cases. In only 3 cases was the condition associated with myoma elsewhere. The size varied within great limits. Some of the tumors grow into the stomach like polypi, others toward the peritoneal cavity; only in the earliest stages can they be intramural. Large mild sarcomata frequently have large cystic cavities. Metastases are mentioned in some instances. He gives a bibliography of autopsies.

120. **Gonorrheal Arthritis.**—Moncure, discussing the treatment of acute cases, says that the uselessness of the biologic product is in direct proportion to the acuteness of the process. There are reports of the treatment of gonorrheal arthritis with various serums or antitoxins, and lately by injection of large numbers of dead gonococci or vaccines. Serums or antitoxins have been generally discarded and some reports indicate that the vaccines are more beneficial, especially in very chronic cases. Whatever valuation time and experience may place on the vaccines, in the light of our present knowledge it is much safer to open these joints early than to await for weeks a doubtful result, with the probability of making a cripple and an opium habitué of the patient. When the disease is at all severe, early incision, free flushing of the joint, suturing and injecting with a bland sedative petroleum preparation seems, to his mind, the most rational course to pursue. And this operative treatment can, if desirable, be supplemented with bacterial injections. Finally, adhesions, organized thrombi, ankylosis, subluxations, and contractured tendons are not in the least amenable to vaccines, or to any treatment except corrective operations.

Journal Tennessee State Medical Association, Nashville

March

125 Inversion of the Uterus. J. M. Overton, Nashville.
126 Obstetrics and Obstetric Surgery in the Country. B. F. Fyke, Springfield, Tenn.
127 Croupous, or Lobar Pneumonia. W. L. Carden, Andersonville.
128 Fracture of the Clavicle. D. Eve, Nashville.
129 Medicine. J. P. Blankenship, Maryville.

Journal of the Kansas Medical Society, Kansas City

March

130 *Potency of Out-Dated Diphtheria Antitoxin. J. E. Hunt, Kansas City.
131 Exophthalmic Goiter. M. T. Sudler, Lawrence, Kan.
132 Tonsillotomy and Tonsillectomy. J. S. Wever, Kansas City, Mo.
133 Should Kansas Maintain an Institution for the Care of Her Tuberculous Citizens? J. A. Milligan, Garnett.
134 *Appendicitis in an Infant Aged Seven Months. The Difficulty of Diagnosis Probably Accountable for the Rarity of the Condition in Infants. R. B. Gibb, Pittsburg, Kan.
135 Early Infantile Mortality. M. R. Mitchell, Kansas City.

130. **Old Diphtheria Antitoxin.**—Hunt reports a number of cases in which outdated diphtheria antitoxin was given with good results, from which he concludes that we are never justified in deferring the administration of antitoxin simply because old serum is the only material at hand.

134. **Appendicitis in an Infant.**—Gibb records a case of a "colicky" baby, 7 months old, in which the severity and persistence of the symptoms led to careful investigation under anesthesia, with the result that appendicectomy was done and an inflamed and purulent appendix removed. Recovery was immediate, without shock, and all symptoms were at once relieved. He suggests that possibly the infrequency of appendicitis in infants may be due to its not being diagnosed.

Southern California Practitioner, Los Angeles

March

136 Selwyn Emmett Graves. J. A. Graves, Los Angeles.
137 The Tripod of Medicine, Surgery and the Pathologic Laboratory. A. Vander Veer, Albany, N. Y.
138 Early Diagnosis of Pulmonary Tuberculosis. J. C. King, Banning, Cal.
139 Chronic Nephritis and its Associated Lesions. J. W. Flinn and H. T. Southworth, Prescott, Ariz.
140 The Calmette Reaction. W. W. Watkins, Phoenix, Ariz.
141 The Climate of Southern California. J. A. Munk, Los Angeles.
142 *Ocular Manifestations of Hysteria. W. H. Dudley, Los Angeles.
143 Gonorrheal Ophthalmia. M. M. Cloud, Los Angeles.

142. **Ocular Manifestations of Hysteria.**—Dudley considers especially those ocular manifestations of hysteria that should be borne in mind in doubtful or suspicious cases. These are, first, the anesthesias, manifested by loss of sensation in the eyelids, the conjunctiva and the cornea, by concentric limitation of the field for light and color, by amblyopia, achromatopsia and the so-called inversion of the color fields. Next in order, he places disturbances of accommodation and pupil reaction including the approaching and fixation of the far and near points. These, together with spastic convergence—and they are frequently seen in conjunction—may be considered pathognomonic of this condition, while cycloplegia, with or without mydriasis, in the absence of some known cause, is an important sign. Though other conditions are valuable, these, if sought out and found, will decide the diagnosis in most cases; but they must be looked for, or they are not likely to be found. The marvelous way in which this condition is capable of imitating other diseases renders it highly important that the diagnostician should be always on the alert.

Cleveland Medical Journal

March

144 *Eighteen Months' Clinical Experience with the Use of Koch's Tuberculin in Tuberculosis of Bones and Joints. W. G. Stern, Cleveland.
145 Surgical Questions to be Considered in Treatment of Gastric Ulcer. M. J. Lichty, Cleveland.
146 Blepharochalasis, Report of a Case of This Trophoneurosis, Involving also the Upper Lip. W. B. Laffer, Cleveland.
147 Wright's Vaccine Therapy, with Report of Cases. L. W. Ladd and H. C. Russ, Cleveland.
148 Necessity for Using a Mydriatic in Refraction. E. P. Morrow, Canton, O.
149 Medical Cleveland in the Nineteenth Century (continued). H. E. Handerson, Cleveland.

144. **Tuberculin Treatment of Bone Tuberculosis.**—Stern concludes that Koch's tuberculin, although a terrible agent for harm when used indiscriminately in large doses is a powerful agent for good when used in small doses, either by the opsonic method of Wright or by the clinical method of Trudeau. Notwithstanding statements of the laboratory men to the contrary, no harm can come and a great deal of good can follow the proper use of tuberculin without the control of the opsonic index. No matter which method is followed, tuberculin must not be used alone for treatment, but must invariably be a part of a rigid medical and surgical antituberculous *régime*.

Ophthalmic Record, Chicago

March

150 Sympathetic Ophthalmia with Report of Pathologic Findings in Two Cases. E. P. Carlton, Chicago, and A. R. Baker, Cleveland.
151 Unusual Cases of Operable Cataract. A. O. Pfingst, Louisville, Ky.
152 Novel Improvised Prothesis. R. A. Fenton, Portland, Ore.

Colorado Medicine, Denver

March

153 Fractures of the Leg. W. W. Grant, Denver.
154 *Immediate Operative Treatment of Certain Fractures. L. Freeman, Denver.
155 The Abuse of the Sharp Uterine Curette. J. F. Coleman, Montrose.
156 When and How to Treat Hernia in the Young. R. W. Corwin, Pueblo.

154. **Operative Treatment of Fractures.**—Freeman describes the operative technic and emphasizes and discusses the following propositions:

1. No recent fracture should be operated on that can be successfully treated by other means.
2. No recent fracture should be operated on except under the most favorable surroundings and by an experienced surgeon who is a master of aseptic technic.
3. The resisting powers of the patient should be taken into careful consideration.
4. The patient's position and duties in life deserve attention.
5. The success of operative intervention depends much on the accessibility of the fracture—the danger varying directly with the amount of manipulation required.
6. It should be recognized that faulty alignment and overlapping of fragments, or even the presence of visible deformity, does not always mean disturbance of function.
7. In estimating the value of an operation the after-treatment deserves consideration; will it be rendered less trying to the patient or give a better result in a shorter space of time?
8. The indications for operation vary greatly with the particular bone which is broken, the character of the break, and its situation in the bone.
9. Admitting the desirability of operating in certain carefully selected cases, it must not be forgotten that there are two important drawbacks—delayed union and sepsis.

Archives of Ophthalmology, New York

March

157 Amaurotic Family Idiocy: Histologic Examination of a Case in Which the Eyes Were Removed Immediately After Death. F. H. Verhoeff, Boston.
158 Cystic Formation by the Pars Ciliaris Retinæ Following a Perforating Wound in the Ciliary Region with the Histologic Findings. B. Chance and H. G. Goldberg, Philadelphia.
159 Keratitis Punctata Superficialis, with Report of a Case. M. Wiener, St. Louis.

Ohio State Medical Journal, Columbus

March

160 More About Cancer of the Rectum. G. B. Evans, Dayton.
161 *A Year's Experience with Lumbar Puncture. C. W. Stone, Cleveland.
162 The Anatomico-Physiologic Basis of Pediatrics. D. S. Hanson, Cleveland.
163 *Economic Importance of the Spread of Trachoma in Ohio. W. H. Snyder, Toledo.
164 *Acute Rheumatoid Infections in Children with Report of Cases. F. P. Anzinger, Springfield.
165 Hygiene of Menstruation. S. J. Goodman, Columbus.
166 The Physician and the Child of the Future. E. H. Smallwood, Chillicothe.

161. **Lumbar Puncture.**—Stone describes and analyses 114 cases in which lumbar puncture was done, often more than once. He recounts the technic, and, as a result of the analysis, emphasizes the following points:

1. The lymphocytes may predominate in an epidemic meningitis and the polymorphonuclear leucocytes in a tuberculous meningitis, as has been noted by Concetti, who stated that a predominance of lymphocytes indicated an irritation of toxic nature, while the predominance of polymorphonuclears indicated an irritation by bacteria.
2. Many of our pneumonia patients with delirium may be found to be actually suffering from a meningitis.
3. Many children with the so called meningismus may have real meningitis.
4. The cell count of the spinal fluid in cases of suspected lues of the central nervous system is a helpful aid in diagnosis.

163. Abstracted in THE JOURNAL, May 23, 1908, p. 1721.

164. **Rheumatoid Infections in Children.**—Anzinger reports cases, discusses the conditions, and draws the following conclusions:

1. Children are susceptible to the infectious diseases which most adults resist by acquired immunity.
2. Acute pyogenic and septicemic infections are common and, often starting from a trivial lesion, permit widespread metastases and even may prove fatal.
3. In children the soft tissues, especially near the epiphyses and joints, are vulnerable points for micro-organisms and their products. The symptoms of such lesions often simulate acute articular rheumatism.
4. Acute rheumatism is regarded as a specific disease due to a specific organism not as yet fully established. Until the cause is known we must depend on clinical characteristics, which are untrustworthy.
5. Acute rheumatism is comparatively uncommon in children, whereas pyogenic infection finds them frequently among its victims.
6. Heredity and environment are important factors in the predisposition of the child to infection as well as rheumatism.
7. Prophylaxis rests in safeguarding the child's general resistance by proper hygiene. A careful watch should be kept of the infection atria of the child, and every trivial infection be properly treated.
8. When one or more joints become acutely inflamed, tentative measures are justifiable for a short period, to allow for resolution or abatement. If, however, the symptoms continue and the diagnosis is obscure, exploratory incision will in the end subserve the best interests of both patient and physician.

FOREIGN

Titles marked with an asterisk (*) are abstracted below. Clinical lectures, single case reports and trials of new drugs and artificial foods are omitted unless of exceptional general interest.

Lancet, London

March 20

1 *Disinfection and Disinfectants. R. T. Hewlett.
2 *X-Ray Carcinoma, and an Experimental Inquiry into the Conditions which Precede its Onset. C. W. Rowntree.
3 *Mechanism Underlying the Various Methods of Artificial Respiration. A. Keith.
4 *Leucocytosis of Epidemic Cerebrospinal Meningitis. W. Dow.
5 Intestinal Pseudoparasitism Due to *Chilodon uncinatus*. P. Manson and L. W. Sambon.
6 Cultivation of *Spirochæta duttoni*. C. M. Duval and J. L. Todd.
7 Uremia or Men.agitis. A. E. Garrod.
8 Malignant Disease of the Nasopharynx. W. Stuart-Low.
9 Problems in Mendelism and Some Biologic Considerations: Human Albinos. G. P. Mudge.

1. **Disinfection.**—In the second Milroy lecture, Hewlett describes and discusses the various methods devised for the determination of the germicidal power of disinfectants. Of these the latest and most important are the Rideal-Walker and the Chick-Martin, or Lister Institute method. He compares these two methods as follows: The Rideal-Walker or drop method is one which has given an enormous impetus to the standardization of disinfectants, and it is relatively simple to carry out—a very desirable condition. With the emulsified disinfectants it works well, but with disinfectants like mercuric chlorid, which act comparatively slowly, it gives too low a value according to Chick and Martin. It is lacking in that in its original form it does not introduce organic matter into the test, a matter of considerable importance. This, however, may be remedied by the addition of feces, or perhaps better still of gelatin and starch. In some instances the use of a 1 per cent. solution which has stood for 24 hours, for making the test dilutions is desirable. On the other hand, the Chick-Martin, or Lister-Institute, method is applicable apparently to all classes of disinfectants, and has the advantage that but a single variant (that of concentration of disinfectant) is present, and not two variants—concentration and time—as in the Rideal-Walker or drop method. The method, however, is not nearly so simple to carry out as the Rideal-Walker one. The introduction of organic matter in the form of feces marks a step in the right direction, but further work alone can prove whether this is the best material to employ. Finally, he briefly describes Schryver and Lessing's physico-chemical method for comparing the antiseptic value of disinfectants, which was published a few months ago.

2. **X-Ray Carcinoma.**—Rowntree says that probably there are two essential conditions for the formation of a squamous-

cell carcinoma: (1) The presence of a mass of epithelial cells which are capable of multiplication, and (2) a surrounding area of connective tissue in such a special condition as to render it vulnerable to epithelial invasion. With regard to the second condition, he has already shown that the connective tissues in advanced *x*-ray dermatitis are in almost precisely the same condition as that shown last year by Dr. V. Bonney invariably to obtain in precancerous conditions. With regard to the first condition, it is a feature of *x*-ray dermatitis that in certain stages the subepithelial tissue shows the presence of masses of epithelial cells more or less completely detached from the surface epithelium. It is not difficult to imagine that such a mass of cells, lying isolated in a favorable stroma of altered connective tissue, may, as the result of the stimulating effects of constant small doses of the rays it is undoubtedly receiving, be excited to grow, and as there is no longer any normal purpose which this isolated mass of epithelium can fulfil it proliferates abnormally and invades the surrounding parts. In regard to *x*-ray treatment of malignant growths, all observers are agreed that it is only in very superficial conditions that amelioration can be confidently anticipated; and rodent cancer, the only variety in which only good results have been obtained, is the most superficial.

3. **Artificial Respiration.**—In the second Hunterian Lecture, Keith devotes his attention to the period of mechanical expansion and compression of the chest wall (1856-1909). After a brief summary of compression methods employed prior to 1856, Keith discusses the methods of Marshall Hall, Silvester, Pacini and Bain, and Howard, and recounts B. W. Richardson's experiments. He then considers the resuscitation of stillborn children, paying particular attention to the methods of Schroeder, Schücking, Schüller, and to the recommendations of R. L. Bowles.

4. **Leucocytosis of Epidemic Cerebrospinal Meningitis.**—Dow reports his observations into the leucocytosis in 36 out of 55 verified cases admitted into Belvedere Fever Hospital. He divides them into 4 groups: (1) Acute cases, fatal; (2) abortive cases, recoveries; (3) mild cases, recoveries; (4) chronic cases, 21 cases with 3 recoveries. An analysis of these observations under their respective headings and of the tables in which the various blood cells are dealt with leads to the following conclusions:

1. Cases of epidemic cerebrospinal meningitis are always accompanied by a leucocytosis, whether the attack is acute, abortive, mild, or chronic.
2. The character of the leucocytoses is practically the same in all instances, both in adults and children, and is the result mainly of an increase in the number of the polymorphonuclear cells.
3. Nevertheless, a lymphocytosis may be occasionally observed in infants and young children.
4. There is a relative decrease of the large mononuclear elements, alike in fatal and non-fatal cases, though less marked in the chronic type.
5. In the first three groups there is sometimes an absolute decrease of the large mononuclear elements and occasionally total absence of these cells. In the chronic group absolute decrease, like relative decrease, is little marked.
6. Eosinophile corpuscles in acute fatal cases are always absent, although present in varying degree in all the other groups.

British Medical Journal, London

March 20

10 *Insufficiently Recognized Points in Diagnosis. Sir D. Duckworth.
11 Diagnosis of Fever in Patients from Tropics. P. Manson.
12 Common Mistakes in Ophthalmic Practice. A. C. Roper.
13 Lactic Acid Ferment Preparations for Intestinal Therapy. I. W. Hall and W. A. Smith.
14 *Mining Accidents. J. Robertson.
15 *Simple Method of Estimating Ammonia in the Urine, Suitable for Clinical Purposes. G. C. Mathison.
16 Physiology of Female Genitalia. III. The Correlation of Uterus and Ovaries. W. B. Bell and P. Hick.

10. **Diagnosis of Disease.**—Duckworth thinks that in our depreciation of old medical and surgical books, of the preparations of our pharmacopeias, and in the concentration of our attention on the methods of laboratory experts, we run the risk of crowding out a good deal of soundly acquired and approved experience and of becoming medical scientists rather than expert medical practitioners. He does not depreciate the necessary researches of the laboratory, especially the clinical laboratory, of which there are too few in the medical schools, but, he asks: "What is the meaning of experience in our profession? What is it we call for and fall back on in any grave crisis in our clinical work? Is it not the opinion formed by the man who has seen much of disease, who has watched it and pondered over it, and best conducted his patients through their maladies? Is it in such crises that we instinctively appeal to the last experiences of the laboratory operator?" Duckworth would have us see all things medical with a *mens sana* and a *mens medica*. The best part of our art is still founded in empiricism. In daily practice, in the best interests of his patients, Duckworth is content to be a medical artist rather than a medical scientist, though ever ready to avail himself of the best science that comes with the approval of careful experience. He warns against the prevalent tendency to pay too exclusive attention to the pathologic process in progress, and to neglect the peculiarities of the individual and the conduct of his particular constitution in relation to the particular illness. We are disposed to regard the soil or tissues of the patient as an indifferent medium, akin to the agar of the laboratory, equally ready to react and encourage the development of such processes as may be expected to follow on inoculation. The fallacy of this he illustrates by the case of the transmission of bovine tuberculosis to the human subject. Another point of modern deficiency is that we often fail to try to make a physiognomic diagnosis of our patient, that is to judge promptly, by practice of it, as to the habit of body or diathesis of the individual. Here again he uses tuberculosis for his illustration, and discusses it in relation to the "strumous" and arthritic diatheses. He discusses the so-called nervous diatheses, myxedema and cretinism, localized pain, apparently simple anemia, and the numerous variety of skin diseases. He adds: "If we pay too much heed to the disease and neglect to study the patient, we may miss many indications of early phases of disease. Where a long report has to be made on a person under examination, say for a life insurance policy, it is possible to be so much engrossed in recording answers to questions that we fail to study the individual before us sufficiently, and so miss the fuller appreciation of the particular features of the case. Some of these insurance papers, especially the American ones, are so full of details that they are apt to lead to an inadequate appreciation of the examinee before us, and to occupy too much time."

14. **Mining Accidents.**—Robertson, after describing two cases, discusses the value of oxygen in pit rescue, the effect of "chesting" water on air contained, and the proof of oxygen travel, and deduces the following lessons:

1. In all cases of similar entombments it would be advisable, while sinking a large shaft for rescue purposes, also to sink a large bore hole at the far end of such a position. Had a three-inch bore hole been sunk near the place of entombment of the two men a current of air would have been established and the difficulties we had to contend with avoided.
2. The necessity under such circumstances of taking into account the amount of available air, and the number of men sent into it. If the air is limited, as in this case it was, then the number of men sent down should also be limited, and men not actually working ought to come to the upper seam, all reliefs being kept there, and sent down as required.

He concludes that oxygen is an absolute necessity and a valuable adjunct to all pit plants. The men ought to be trained in its uses, and its properties and uses should form a part of the examination for a manager's certificate.

15. **Estimation of Ammonia in the Urine.**—Mathison details Malfatti's method and finds that its accuracy can be considerably increased by adding 15 grams of powdered neutral potassium oxalate to the urine and shaking for two minutes before titrating. His experience with the method is favorable.

Medical Press and Circular, London

March 17

17 *Hemiplegia Due to Syphilitic Arteritis. G. Milian.
18 Chronic Ulcer of Stomach and Duodenum. A. Thomson.
19 Hydatid Disease of Liver. G. P. Newbolt.
20 State Cure of Leprosy in Norway as it Affects other Countries. A. S. Ashmead.

17. **Hemiplegia of Syphilitic Arteritis.**—Milian says that hemiplegia of syphilitic origin is in most instances due to arterial lesions, and in such case the attack presents distinc-

tive features, consequent on the mode of production of obliterative endarteritis, which does not obstruct the lumen of the vessel all at once, but in a progressive manner. The course of the disease may be roughly divided into three periods: (1) A period of functional disturbance corresponding to invasion of the vessel, during which the patient complains of painful or other manifestations; these, however, have no direct bearing on the terminal symptoms; (2) a meiopragic or paretic stage, corresponding to partial obliteration of the vessel, during which we get in an attenuated, incomplete, intermittent form the terminal symptoms; (3) the paralytic stage, corresponding to total obliteration of the vessel and consequent softening of the brain. In the first period, headache is usually the premonitory symptom, accompanied or followed by dazzling of sight, blurred sight, and other subjective symptoms. There may be impairment of memory, diminished aptitude for work, mental depression, prostration and drowsiness. In the second period, the symptoms become more pronounced, and are directly dependent on the ischemic troubles of the cerebral regions involved. Sensory and motor disturbances may occur—cold and tingling, blunting of the sense of touch, or, on the other hand, hyperesthesia; or tremors, muscular twitching, fugitive weakness, clumsy movements and weak grasp, may precede the hemiplegic manifestations, which may or may not be associated with aphasia. Usually, "fugitive aphasia is to syphilitic arteritis what the shadow is to the body and follows its evolution step by step." In the paralytic period, which obtains in at least 50 per cent. of cases of cerebral syphilis, it may affect three distinct forms: (a) complete from the outset, (b) general but progressive, and (c) successive or by stages, named in the order of their rarity. In the last case the paralysis first shows itself in a limb or segment of a limb —the hand, for instance. On the following day it extends to the face, and later to the lower limb, until the hemiplegia is complete. In short, it is hemiplegia by a succession of monoplegias.

Journal of Obstetrics and Gynecology of the British Empire, London

March

21 Wertheim's Panhysterectomy for Carcinoma of the Cervix. C. Berkeley.
22 •Prematernity Hospital Practice: Thirty Cases of Morbid Pregnancy treated in the Royal Maternity Hospital, Edinburgh. J. W. Ballantyne.
23 •What is the Pelvic Floor? A Criticism, in which the Position of the Urinary Bladder During the Latter Months of Pregnancy and During Labor is Considered. R. H. Paramore.

22. Pre-maternity Hospital Practice.—Ballantyne concludes the article commenced in the last issue. He adds the following conclusions to those advanced by him on previous occasions:

It is very difficult to do full justice to pre-maternity cases in a maternity hospital, with the ordinary staff of that institution. Patients before labor require diet and regimen different from that which they need in the puerperium, and there is a want of elasticity in the management of a maternity hospital which makes it not very easy to cater and care for the pregnancy patients. The nursing, also, should be slightly different, so as to make it possible for nurses to be allotted to individual cases, and to give medical or surgical, as well as purely obstetric care; as it is, the sudden calls and irregular work in a maternity hospital make it difficult to give this kind of attention. The medical officers, also, are hampered in their efforts to benefit the pregnancy cases by the other demands on their time and strength; for instance, a resident surgeon who has been up twice during the night at an indoor forceps case and an outdoor postpartum hemorrhage, is not in the best condition for making blood films and carrying out the finer methods of uranalysis the next morning. These and other difficulties, Ballantyne asserts, could be got over if his original proposal of a prematernity hospital in a semidetached building could be carried out. Then, and only then, would the full value of prematernity hospital treatment be revealed.

23. The Pelvic Floor.—Paramore concludes his article, begun in the preceding issue, as follows: From a consideration of the position of the bladder, we may conclude that during the latter months of pregnancy it is already in part an abdominal organ, and that its transplantation is completed before the actual mechanism of extrusion of the fetus has commenced. We can not, therefore, accept the idea that the bladder forms part of the pelvic floor; nor can we regard the pelvic floor as being composed of two segments, one pubic, which is pulled upward, and the other sacral, which is pushed downward, during labor. As the child descends, the other pelvic contents pass upward until the fetal mass meets the actual pelvic floor. It is here resistance is experienced, it is here the actual process of extrusion commences; for to gain the outside, the fetus has of necessity to pass through the limiting musculature of the pelvic recess; and it is to this structure, which, with the coccyx and anococcygeal ligament, plays such an essential part in the support of the pelvic viscera and in the preservation of the intra-abdominal pressure, at the same time that it permits the functioning of the passages which pass through it, that the name of "pelvic floor" is definitely to be given.

Glasgow Medical Journal

March

24 Recent Methods of Examination of the Nose and Throat. J. MacIntyre.
25 Hodgkin's Disease. R. B. Ness and J. H. Teacher.
26 Treatment of Hypertrichosis by *X*-Rays. J. Donald.

Journal of Laryngology, Rhinology and Otology, London

March

27 Suppurative Media Otitis with Mastoid Symptoms, and Infectious Pseudorheumatism of Nasopharyngeal Origin. L. Bar.
28 Modern Treatment of Syphilis, Especially in Regard to the Upper Respiratory Passages. W. A. Lieven.

Annales de Dermatologie et de Syphiligraphie, Paris

February, X, No. 2, pp. 81-142

29 Comparison of Sporotrichoses and Coccal Infections. (Comparaison des sporotrichoses et des infections coccicennes. Sporotrichoses aigues et subaigues disseminées. Sporotrichomes à évolution phlegmasique.) De Beurmann and Gougerot.
30 Radiotherapy of Epithelial Cancer. (Statistique et reflexions à propos du traitement radiothérapique du cancer épithélial, en particular du cancer épithélial superficiel.) Lenglet and Sourdeau.
31 Epithelioma Consecutive to Lupus Erythematosus. W. Dubreuilh and G. Petges.
32 Lymphangitis and Abscess from Simple Chancre with Autoinoculation. (Trois cas de chancre simple de la verge avec lymphangite abcédée et chancrellisation secondaire des téguments.) P. Gastinel.

Obstétrique, Paris

February, II, N. S., No. 2, pp. 81-176

33 Double Large Intestine in New-Born Infant. P. Bar and M. de Kervily.
34 Prophylaxis of Infant Mortality in France. (Moyens utilisés en France pour lutter contre la mortalité infantile.) V. Bué.
35 Jaundice in the New-Born. (Ictère du nouveau-né.) M. Leuret. Id. V. Cathala and R. Daunay.

Presse Médicale, Paris

March 6, XVII, No. 19, pp. 161-168

36 Treatment of Cancer by Fulguration. P. Fredet.
37 Drainage of Hepatic Duct. (Drainage du canal hépatique.) P. Sikora.

March 13, No. 21, pp. 177-192

38 •Diagnostic Tuberculin Reaction on the Nasal Mucosa: Rhinoreaction. Lafite-Dupont and Molinier.
39 •Remote Medical Consequences of Contusions of the Kidney. (Suites médicales lointaines des contusions du rein.) J. Simonin and Tanton.
40 Scoliosis after Infantile Paralysis. P. Desfosses.

38. The Nasal Tuberculin Reaction—Rhinoreaction.—Lafite-Dupont and Molinier state that a specific reaction was obtained in 68 out of 73 tuberculous patients tested by applying directly to the mucosa of the nose for ten minutes a small tampon wet with a 1 per cent. solution of tuberculin. The tampon clings to the mucosa, while the patient refrains from breathing hard or coughing. The reaction consists in a localized exudation at the spot preceded by more or less intense congestion of the mucosa. The exudate dries and leaves a small yellowish crust. This reaction becomes apparent in from eighteen to forty-eight hours, but is long in subsiding, sometimes lasting for ten or eleven days, but generally not over a week. The patients with pleurisy gave a positive re-

action in 3 out of 11 cases, and all those with pulmonary tuberculosis. The findings of the test seem to be as reliable, they declare, as the ocular and cutaneous tuberculin tests, while the procedure is much simpler and less annoying and, they assert, is absolutely harmless.

39. **Tardy Consequences of Contusion Affecting the Kidney.**—Simonin and Tanton report two rare cases of reduction of secreting power in the kidney. In one case, the kidney was injured by a kick from a horse, and a latent nephritis developed with tendency to formation of stones; in the other case the blow left a cicatrix, palpable two years later, which interfered with the secretion of the organ, but did not seem to impair the general health. The prognosis of these contusions of the kidney depends on the presence or absence of infection. The other kidney does not suffer so long as the effects of the contusion do not include an infectious process. After an accident of the kind, the condition of the injured kidney and of its mate should be investigated from time to time. He certified in the two cases reported that the earning capacity might be estimated as being reduced about 30 per cent., but he qualified his estimate as requiring revision later.

Archiv für Gynaekologie, Berlin

LXXXVII, No. 3, pp. 497-755. Last indexed March 27, p. 1069

41 Etiology of Uterovaginal Prolapse. O. Nebesky.
42 *Etiology and Treatment of Sterility in Women. **E.** Runge.
43 Acardia and Acute Hydramnion. M. Krüger.
44 *Automatic Movements of Uterus and Their Importance for the Pathology and Treatment of Uterine Infections. (Experimentelle Beiträge zur Kenntniss der automatischen Bewegungen des Uterus und deren Bedeutung für die Pathologie und Therapie der uterinen Infektionskrankheiten, Insbesondere der Gonorrhoe.) C. Schindler.
45 Chronic Metritis. C. Hueter.
46 *Placental Theory of Etiology of Eclampsia. W. Weichardt.
47 Ovarian Lymphangioendothelioma. T. Kubo.
48 *Duration of Pregnancy. (Wann tritt die Geburt ein?) F. Schatz.

42. **Etiology and Treatment of Sterility in Women.**—In examining for the cause of the sterility in 66 cases, Runge found infantile conditions in cervix or uterus in some and in others the vagina was shallow and gaping so that fluids ran out at once and nothing was retained. Examination of 17 controls, married women who had borne children, showed retention of spermatozoa in the genital tract, while in 34 of the 66 sterile women, under the same conditions, all the fluids escaped at once and no spermatozoa could be discovered. In treatment he aimed to enlarge the posterior vaginal vault and to render the cervix more readily permeable. By packing the end of the vagina with gauze, supplemented by massage, or by the use of the mercury colpeurynter, the posterior vaginal vault can be hollowed out into a pocket which will retain fluids, or a suitable pessary might accomplish the purpose. Operative measures may be needed for an extremely shallow, conical vagina with torn and gaping meatus. By raising the foot of the bed or the buttocks the vagina can be made to slope downward more and the escape of fluids be prevented. His examination was exceptionally thorough and the system followed demonstrated for the first time the actual conditions regarding the passage of spermatozoa into the uterus when infantile conditions prevail. The details of microscopic findings, etc., are tabulated for comparison.

44. **Automatic Movements of the Uterus.**—Schindler gives an illustrated description of the experimental technic with which he was able to study the behavior of the rabbit uterus in the living animal under various stimuli and also the surviving uterus. The research has shown that the uterus possesses the property of automatic intermittent and regular contraction, in itself, independent of the central nervous system. The adnexa and also the ligament apparatus have likewise their own automatic rhythmic peristalsis. The automatic intermittent waves in the adnexa occur symmetrically and synchronously with the peristalsis of the uterus under normal conditions, but may become irregular during fatigue and in consequence of artificial injury. Besides the wave-like contraction of the longitudinal muscles toward and away from the vagina there are also waves of the circular muscles in the uterus and ligaments and local restricted contractions. Mechanical, chemical and thermic stimuli increase the intensity of the automatic movements, and each uterus has its own peculiar individual excitability, as also the adnexa. Extremely violent movements of the entire sexual apparatus can be induced by various stimuli. The cornua roll up, twist together, stand almost straight up, the adnexa and the broad ligaments waving to and fro like a pendulum and up and down until the effect of the stimulus subsides. The response is much more intense with heat stimuli than with mechanical or chemical. In some of the animals the entire sexual apparatus was set in the most violent motion by an injection of Locke's solution heated to 40 C. (104 F.). This did not occur as the rubber tube was inserted, but only as the warm fluid flowed over the sexual organs. Violent movements were also set up by injection into the cornua of the uterus of solution of silver nitrate or other silver salt. The antiperistalsis of the tubes and ligaments in gravid animals is sometimes so violent that the uterus is drawn up toward the ovaries. He calls these movements "frightful," as they explain the rapidity of ascending infection. They also show that the ordinary therapeutic measures, vaginal douches and rectal enemas, hot air douches and cauterization with chemicals, are all strong stimuli which increase the automatic peristalsis or antiperistalsis of the uterus. If the gonococci have passed the internal os, a single vaginal douche may induce a transient antiperistaltic movement which may decide the patient's fate by carrying the cocci to the adnexa. Bumm has reported a case in which in eleven days after the infection both tubes were palpable as thickened, club-like cords. Schindler saw that the peristalsis alone was able to cause regurgitation of the pus as the uterus was lifted up and swung to and fro by the contracting ligaments. Venous hyperemia has a tendency to reduce the automatic movements of the uterus and its excitability. The practical conclusion from his research is the necessity for keeping the uterus quiet in all inflammations. The entire treatment of gonorrhea should be placed on a new basis. Rest in bed is not enough alone; the peristalsis is unmodified. But in atropin, he says, we have a drug which actually arrests the automatic movements of the sexual apparatus and thus keeps infection from spreading. He uses it in gonorrhea, both in women and men, and has been much impressed by the way in which it hastens the cure. Tabora advocates atropin in treatment of gastric ulcer, from much the same standpoint, aiming to tranquilize the stomach and hold it still. He has injected subcutaneously from 1 to 3 mg. a day for weeks at a time without appreciable by-effects. Schindler shows further that when suction hyperemia is applied it must be kept up from one-half to two hours without pauses to avoid stimulating peristalsis. The period immediately afterward may be seized for local silver nitrate disinfection, as venous hyperemia checks the peristalsis. Suction hyperemia is contraindicated if the infection has extended beyond the cervix.

46. **Etiology of Eclampsia.**—Weichardt relates research which suggests that the symptom-complex of eclampsia is a manifestation of anaphylaxis, hypersusceptibility, induced by antibodies producing this effect.

48. **Duration of Pregnancy.**—Schatz continues from the preceding volume his extensive study of the physiologic waves regulating the duration of pregnancy.

Archiv für Kinderheilkunde, Stuttgart

XLIX, Nos. 5-6, pp. 321-384. Last indexed February 27, p. 749

49 Biologic Relations Between Mother and Child. (Zur Frage der biologischen Beziehung zwischen Mutter und Kind.) C. Stäubli.
50 Mongolism. (Anatomische Studien über den Mongolismus.) P. Hellmann.
51 *Care of Infants in Hospitals. (Zur Säuglingspflege im Krankenhause.) J. Gewin.
52 Congenital Aplasia of Biliary Passages accompanied by Cirrhosis of the Liver, Cured by Operation. (Angeborene Aplasie der Gallenwege verbunden mit Lebercirrhose, durch Operation behandelt.) F. Theodor.
53 Suprarenals and Suprarenal Treatment in Rachitis. (Nebennierensubstanz in Rachitis.) A. Jovane and C. Pace.

51. **Care of Infants in Hospitals.**—Gewin tells of the conditions and regulations in the Amsterdam Hospital where 286

infants were received in the infant department in about three years. In 54 cases the infants were healthy. He discusses the means of warding off infection, and urges the importance of keeping the healthy infants away from the sick, with particular isolation for all children with severe affections of the air passages. Attendants suffering from colds should be kept away from the infant department. Visits to sick infants should be restricted to the minimum, and every effort made to secure breast milk for them. One child was received at night and the next morning Koplik's sign was apparent. Although it was at once transferred to the contagious ward, measles developed thirteen days later in some of the other infants.

Berliner klinische Wochenschrift

March 8, XLVI, No. 10, pp. 429-476

54 *Surgical Treatment of Tuberculous Affections of Hip Joint. (Operative Entfernung des tuberkulös erkrankten Hüftgelenks.) König.
55 *Brain Surgery. (Hirnchirurgie.) O. Foerster.
56 Some Cases of Surgical Trauma. (Unfallchirurgie.) R. Mühsam.
57 The Antitryptic Index of the Blood in Malignant and Septic Disease. (Untersuchung über den antitryptischen Index des Blutes bei bösartigen Geschwülsten und septischen Erkrankungen.) F. Landois.
58 Serodiagnosis of Syphilis in Practical Surgery. G. Wolfsohn.
59 Technic for Access to Hypophysis. (Zur Freilegung der Hypophysis.) L. Loewe.
60 A Precision Pipette for the Blood Count. (Zur Blutkörperchenzählung.) H. Hirschfeld.
61 Puncture Treatment of Gonorrheal Epididymitis. (Die neueren Behandlungsmethoden der Epididymitis gonorrhoica unter Mitteilung eigener Versuche mit der Punktionsbehandlung.) Ernst.

54. Operative Treatment of Tuberculous Hip Joint.—König has been investigating the present condition of 568 former patients with a tuberculous hip-joint affection. All but 294 required operative measures, and 202 of this group of 294 non-operative cases have been re-investigated; 55 of the patients had died of intercurrent affections and 114 were cured without necessity for aid in walking; in 33 the joint had regained normal function, and 90 had a more or less movable joint. Besides these 114 cases with excellent results, 35 patients still required a cane or crutch and in 3 cases the condition was bad; in 13 there is still a fistula. In the group of 274 resections no news could be obtained of 60 patients; of the others, 66 were cured, and in 16 of these cases the result was extremely fine and the patients were able to dance and take long walks. Canes or crutches still have to be used by 43 patients, and 35 still have fistula. As only the severer cases are given operative treatment, these results he regards as extremely favorable. He has done resection on the hip joint in 400 cases, and remarks that his technic seems to be overlooked by other surgeons. The principle is to remove every trace of diseased tissue. The operation is much more complete than what used to be called "resection," but he retains the name as the incision and part of the operation is the same as in the old technic.

55. Brain Surgery.—Foerster's first patient was a man of 44 with intradural hematoma from a fall down a flight of stone steps. Aphasia developed the next day and monoplegia and cortical epilepsy followed by the sixth day. Immediate improvement followed trephining and evacuation of the hematoma six days after the fall. The dura was not sutured and part of the bone flap was removed. In less than three weeks normal conditions were entirely restored. In the second case there was a "depression fracture" of the left parietal bone. Trephining cured the symptoms except the oculomotor paralysis. The patient was a boy of 6 and the unconsciousness lasted for sixteen days after the trauma. In discussing these and similar cases he remarks that the most important symptom in the indications, so far as the brain is involved, are the contractures from irritation or Jacksonian epilepsy. He advocates expectant treatment in case of aphasia until these develop, but as soon as the symptoms of irritation become apparent he would operate without a moment's delay. He adds, however, that the symptoms of irritation of the cortex, especially the epileptic manifestations, supply the indication for operative measures, while the focal symptoms are less important from this standpoint. In a third case the Jacksonian epilepsy in the right arm was due to a tubercle in the cortex; this patient also recovered after trephining.

Centralblatt für die Grenzgebiete der Med. und Chir., Jena

XII, No. 3, pp. 81-128. Last indexed March 6, p. 803

62 *Ascarides and Their Importance from the Surgical Standpoint. (Askariden und ihre Bedeutung für die Chirurgie.) L. Müller. Commenced in No. 1.

62. Ascarides and Their Importance from the Surgical Standpoint.—Müller summarizes the main points of 155 articles in international literature each reporting one or more cases of serious, almost invariably fatal, trouble from the presence of ascarides. The large proportion of adults in the series is remarkable. The evidence shows that the ascaris is able to perforate the intestinal wall, especially when favored by tuberculous, typhoid, or other ulcerative lesions. The possibility of disturbance from ascarides in the biliary apparatus also should be borne in mind, particularly when children or adults known to have worms present chronic jaundice, convulsions, fever, violent pain in the liver region or symptoms of an abscess in the liver. The tendency of these worms to work their way into minute openings is shown by the way in which they are found in swallowed beads or loops of wire. A febrile temperature evidently tends to render them more actively migratory, as also retching and vomiting. In over two dozen recorded cases ascarides were responsible for appendicitis. The fatal cases in the biliary apparatus were almost all in adults. Davaine collected 47 cases of tumors in the abdomen, the result of perforation of the intestinal wall by the worms. The list is a long one in which death was caused by suffocation from ascarides getting into the upper air passages. In only a few instances was the patient saved by discovery and removal of the worm. The diagnosis is difficult, although the sudden onset of the suffocation suggests a foreign body. It is important to examine the throat with great care but even tracheotomy does not always reveal the disturbing cause. The worms have been found in the lungs, pleura, peritoneum and appendix, besides the main digestive tract, but only one case seems to have been reported of ascarides in the uterus and one in the Fallopian tube. Cases are on record of the passage of the worms through the Eustachian tube and lachrymal canal, generally after a febrile affection. The ascarides in tuberculous, typhoid and other ulcerative processes are perilous foreign bodies, to say the least, the rough edges of their lips being liable to erode the ulcerating surfaces, and their tendency to penetrate into narrow openings being liable to cause enlargement of a perforation anywhere and prevent its healing.

Correspondenz-Blatt für Schweizer Aerzte, Basle

March 1, XXXIX, No. 5, pp. 145-184

63 Importance of Serodiagnosis of Syphilis. (Bedeutung der modernen Syphilis-Forschungen, besonders der Serum-Diagnostik für die Klinik der Syphilis.) Jadassohn.
64 *Pathology and Treatment of Scarlet Fever. (Scharlach.) T. Zangger.

64. Scarlet Fever.—Zangger writes from personal experience besides his clinical observation; at the age of 41, four years ago, he noticed one morning that he had a slight sore throat with a trace of fever, and in the afternoon discovered an exanthem on the chest of unmistakable scarlatinal aspect. There was no known source of infection in his environment unless he had acquired the infection at a meeting of a medical society two days before. During the morning of the day his eruption developed he had made professional calls on children in six families and dined at home with his own five children at noon, none of whom had had scarlet fever, but none of these children developed scarlet fever in consequence. This with his clinical experience reaffirms that scarlet fever is not communicable in the early stages, but is transmitted mainly by the secretions from the mouth, nose and ears. The exfoliated epithelium after the fourth or fifth week does not seem able to carry contagion. Initial vomiting is an aid for the diagnosis when such occurs. In one case in his experience a toxic erythema misled him for several days until desquamation set in. In another case the scarlatina recurred eight days

after the eruption had paled. As the virus of the disease seems to be specially located in the nose and throat he advocates local antisepsis as of extreme importance for attenuating the severity of the infection and warding off complications. For this he has found a 1.5 or 3 per cent. aqueous solution of hydrogen dioxid the most effectual and harmless. Since he has instituted this hydrogen dioxid local antisepsis, spraying the throat and nose vigorously, himself, twice a day, he has not witnessed the development of any complications such as albuminuria, swelling of glands, otitis, etc. He used this spray on himself for four days and experienced great relief from it each time; the fever subsided by the third day and he felt quite well with no further disturbances, but refrained from resuming his practice until the thirty-fifth day. The room he had occupied and the adjoining bathroom were disinfected by the authorities, and no further case of scarlet fever developed. He remarks that the official disinfection is frequently rendered futile by the fact that although the patient has confined himself to one room during his illness, yet as convalescence comes on he is apt to go into other rooms and thus infect the whole house. The statistics at Zurich, where Zangger resides, show an average of 436 cases of scarlet fever each year; 12.1 per cent. occur after the age of 15, and 7.5 per cent. after 20. In 15 cases in the last few years the patients were over 40 and in 2 others over 50. The mortality is highest in children under 2 and gradually declines with increasing age. It averaged only 1.23 per cent. in the last 3,690 cases.

Deutsche medizinische Wochenschrift, Berlin

March 11, XXXV, No. 10, pp. 425-464

65 A Year of Gynecologic Disinfection without Water and Soap. (Ein Jahr gynäkologischer Desinfektion ohne Wasser und Seife.) O. v. Herff.

66 Structure of Upper Funnel of Vena Cava and its Relation to Absolute Irregularity of the Pulse. (Struktur des oberen Cavatrichters und seine Beziehungen zum Pulsus Irregularis perpetuus.) Koch.

67 *Simplification of Serodiagnosis of Syphilis. (Zur technischen Vervollkommnung des serologischen Luesnachweises.) J. Bauer.

68 Technic of Roentgen Moving Pictures. F. M. Groedel.

69 *Improved Method of Showing up the Tubercle Bacilli. (Neue Methode des Tuberkelbazillennachweises.) L. Lange and P. Nitsche.

70 *Quantitative Cutaneous Tuberculin Reaction and Clinical Importance of Strength of Tuberculin. (Klinische Bedeutung des Tuberkulintiters.) V. Ellermann and A. Erlandsen.

71 *Chronic Idiopathic Internal Hydrocephalus Cured by Drainage of the Ventricle. Halben.

72 Irrigation Endoscopy in Chronic Urethritis. H. Lohnstein.

67. **Improved Technic of Serodiagnosis of Syphilis.**—Bauer expatiates on the necessity for having always fresh guinea-pig serum for the test, but states that the fresh serum can be frozen in small amounts and kept frozen, one of the pieces being used for each test. When frozen it retains all its properties as when fresh. He adds that the combination of artificial and natural amboceptors is not only superfluous, but is liable to transform a positive into a negative reaction from the excess of amboceptor. That naturally in human serum is sufficient, when sheep blood is used.

69. **Improved Technic for Detection of Tubercle Bacilli.**—Lange and Nitsche utilize the property of tubercle bacilli to be carried up to the surface of water by the rising droplets of a hycrocarbon element in the fluid. Other bacilli are not thus carried up by the rising hydrocarbon droplets and are found in the lower depths of the fluid while the tubercle bacilli collect almost exclusively at the surface. About 5 c.c. of sputum is mixed with 50 c.c. of one-tenth normal potassium hydroxid and left until completely blended (homogeneized), shaking frequently. Then 50 c.c. water is added and the whole well shaken. The hydrocarbon is then added; ligroin is the hydrocarbon selected as its droplets are slower in rising and thus give the bacilli time to cling to them. They use 2 c.c. of a ligroin with a melting point between 90 and 120 C. The whole is then vigorously shaken and heated in the water bath to 60 or 65 C. until the hydrocarbon has separated. Loops are then taken from the junction of the supernatant ligroin and the fluid below and transferred to a warmed object-glass. As the ligroin evaporates so quickly, several loopfuls can be deposited on top of each other.

70. **Clinical Importance of Tuberculin Titration.**—Ellermann and Erlandsen obtain the cutaneous tuberculin reaction by a titration method, inoculating the thigh in a row with a series of standard solutions of the tuberculin of varying strengths. By this means they eliminate individuals with merely latent tuberculosis as only those with active tuberculous processes react to the weaker solutions.

71. **Chronic Idiopathic Internal Hydrocephalus Cured by Drainage of the Ventricle.**—Halben states that all the main symptoms have retrogressed since the operation done by Payr last October. The patient was a girl of 16; Payr introduced into the right lateral ventricle a piece of an artery about 2 mm. in diameter taken from a calf. The artery had been hardened in formalin and dipped in paraffin and was fastened to allow communication between the ventricle and the epidural and subdural space at the top of the head. The headaches, choked disc, nystagmus, abducent paralysis, and tremor all vanished at once or by the end of a month, and vision, which had been 1/2 on each side, was 4/5 and 5/5 when the patient was discharged two weeks after the operation. Slight headache at times is the only trace left of the former trouble except that the papilla looks a little dirty. The patient had always suffered more or less from headache, but the other symptoms first developed about five months before the operation.

Medizinische Klinik, Berlin

March 7, V, No. 10, pp. 343-380

73 Bronchial Asthma. R. von den Velden.

74 Peripheral Neuritis with Infectious Diseases. (Periphere Neuritiden bei Infektionskrankheiten.) Kerschensteiner.

75 Pigmentation of Buccal Mucosa. (Vorkommen von Mundschleimhautpigmentierung.) W. Mollow.

76 Emotional Shocks. (Affektstörungen.) A. Kutzinski.

77 Blood Pressure in Rarefied Air. (Verhalten des maximalen und minimalen Blutdruckes beim Menschen in verdünnter Luft.) R. Staehelin.

Münchener medizinische Wochenschrift

March 9, LVI, No. 10, pp. 489-544

78 *Digestive Disturbances of Mental Origin. (Verdauungsstörungen und Psychoneurosen.) W. Fleiner.

79 Mechanism of Adrenalin Glycosuria. W. Straub.

80 *Simplified Technic for Serodiagnosis of Syphilis. (Eine für die Praxis geeignete leicht ausführbare Methode der Serodiagnose bei Syphilis.) H. Noguchi.

81 *Salt and Uremia. (Kochsalz und Urämie.) A. Ceconi.

82 *Spinal Anesthesia with Novocain in Gynecology. (Lumbalanästhesie.) H. Sieber.

83 *Physiologic and Anatomic Research on Spinal Anesthesia, and its Clinical Value. (Lumbalanästhesie.) H. Klose and H. Vogt.

84 Streptococci in Genital Secretions during Pregnancy and the Puerperium. (Die Streptokokken in den Genitalsekreten von Schwangeren und Wöchnerinnen.) F. Fromme.

85 Treatment of Typhoid Bacilli-Carriers. (Typhusbazillenträger.) Liefmann.

86 Injury of Eyes from Lightning. (Augenverletzungen durch Blitzschlag.) R. Hessberg.

87 *Artificial Hall Stimulation of Skin: "Grandination" (Neues Verfahren zur Erzeugung von Hautreizen.) E. Plate.

88 Puerperal Fever. Delpser.

89 *Salt-Poor Diet as a Systematic Method of Treatment. (Die kochsalzarme Diät als Heilmittel.) F. Mendel. Commenced in No. 9.

90 Frequency of Various Fatal Diseases at Different Ages. (Verteilung der tödlichen Krankheiten auf die Lebensalter.) F. von den Velden.

78. **Digestive Disturbances of Mental Origin.**—Fleiner urges that greater attention should be paid to the mental origin of a number of disturbances in the digestive sphere. He insists that there is no such thing as primary nervous dyspepsia; the trouble thus called is only functional disturbance in the stomach or intestines, or both, of psychogenic origin. These disturbances may occur alone or may complicate existing affections of the organs. He says that it is an immense advantage to say "psychic" or "of mental origin" instead of "nervous," as the correct diagnosis suggests the proper treatment. Until the patient has acquired the necessary degree of confidence in the physician it is well to be reticent in regard to the etiologic diagnosis, merely speaking of functional dyspepsia, then later discussing the functional psychoneurosis causing the trouble. The prospects for treatment are much more encouraging from this standpoint. He states that one-third of all the dyspeptic patients in his hospital practice last year were of this class. The frequency of the generally misunderstood trouble is sufficient reason for making an earnest study of this form of psychoneuroses and their proper

treatment, which can be only along the lines of psychotherapy. He commends Dubois' recent works on the subject as summarizing most ably the principles of psychic treatment of psychoneuroses. The diagnosis is easy, and much time is gained by dispensing with functional tests and attempts to disinfect the digestive tract or operate on it or on a wandering kidney. All these measures are useless, and the time thus gained may be spent in sympathetic encouragement of the patient. The anxious restrictions of the diet that previously prevailed can be discarded, and the patient gains confidence as he finds he thrives on a wholesome family diet.

80. Discussed editorially in THE JOURNAL, April 3, page 1113, and April 10, page 1186.

81. **Salt and Uremia.**—Ceconi reviews the research of others on the elimination of chlorids, especially of salt, in its bearing on the origin of uremia. He then relates personal experimental research which confirms the assumption that a tendency to impermeability on the part of the kidneys entails a retention of sodium chlorid more than of any of the other salts. This in turn upsets the osmotic balance in the circulation and interstitial fluids and also in the tissues, causing disturbances of various kinds, which cooperate in producing the clinical picture of uremic poisoning. The electrolytes then present in the juices and tissues are not sufficient to neutralize this excess of salt. This theory of the pathogenesis of uremia is based on the fact of retention of salt and also on the recent theories that the mechanism which insures the maintenance of the osmotic balance depends on the physical properties of the ions involved and especially on the quality and quantity of their electric charges.

82. **Spinal Anesthesia.**—Sieber remarks that the importance of the spinal method of anesthesia is generally accepted now and the only question is the choice of the anesthetic. He relates experiences with novocain used in 200 cases, including all the vaginal operations, and all the laparotomies on feeble elderly women with pathologic heart or kidneys. Under other conditions he prefers the ordinary inhalation technic as more agreeable and giving a better prognosis. He has found that the tendency to retching and vomiting during the operation is much reduced by giving a cup of tea with a teaspoonful of brandy one hour before the spinal anesthesia. The amount of the anesthetic seems to influence the tendency to retching less than the kind of operation.

83. Practically the same article was reviewed last week in these columns, page 1217, abstract 116.

87. **Principle of Sand Blast Applied for Stimulation of the Skin.**—Plate applies the term "grandination" to his method, from the word, *grando*, hail. He uses fine seeds for the hail, chiefly on account of their elasticity, and gives an illustrated description of the simple apparatus devised for the purpose. No other measure known, he declares, induces such intense arterial hyperemia as the impact of the seeds, and they also exert a kind of massage, as the muscles contract under the influence of the pelting.

89. **A Salt-Poor Diet as a Therapeutic Measure.**—Mendel describes a few striking cases to show the remarkable benefits that may be derived from reducing the intake of salt in disturbances in the circulation. He also reports one case in which an abnormally large ingestion of salt led to disturbance in the heart action with extreme edema. The causal importance of the salt in this case was confirmed by the immediate improvement when the patient was restricted to an exclusive milk diet. The edema vanished in three days. The pulse dropped to 100, the liver subsided to normal size in a week, when ordinary diet was resumed, merely restricting the amount of salt; in another week not a trace of disturbance in the circulation could be detected. He draws conclusions from recent experimental research which throw light on a number of different affections. The effect of hydremic plethora from salt accumulating with its accompanying water is shown to be peculiarly striking in various skin and serosa affections, especially in inflammation accompanied by exudation of serum through the altered vessels. An inflammation which in the control animals caused no tumor or exudation to speak of became very much swollen, with profuse exudation, when there was accumulation of salt and its accompanying water. Transferring these experimentally learned facts to clinical pathology, he found that retention of salt (and water) not only alters the clinical picture of inflammation, but has a more or less injurious influence on their course. If the serous membranes are involved in the inflammation there is greatly increased effusion. The effect of the hydremic plethora is seen in pleurisy and in synovitis in a joint as the effusion rapidly increases in amount. These accumulations of fluid compress the lymphatics and capillaries, and thus have an unfavorable influence on and prolong the course of the inflammation, besides the damage from compression of the neighboring organs. Compression of the lymphatics also interferes with reabsorption. Great benefit consequently follows the reduction of the hydremic plethora. The effusion is reabsorbed more rapidly the less salt is taken with the food. The reduced proportion of salt leads to a powerful osmotic current from the tissues out into the blood and increases the diuresis which further reduces the pressure in the interstices of the tissues, and this in turn favors reabsorption of the morbid effusion. The course can be thus modified of a burn, of eczema, of ascites with cirrhosis of the liver, of pleurisy, gonorrheal epididymitis and joint affections, venous thrombosis with stasis edema and arteriosclerosis—he relates instances of all these in which a remarkable turn for the better followed reduction of salt in the diet. He shows that even normal amounts of salt in the diet increase the fluid in the body 1.5 to 3 liters, and that an excessive intake of salt may entail retention of salt and water even in the healthy individuals with sound kidneys. The healthy organism tolerates this excessive amount of fluid without disturbance, but there is transudation and exudation whenever the vessels are damaged from any cause. In parenchymatous nephritis the hydremic plethora causes edema. In heart affections it increases the resistance in the circulation, favoring thereby failure of the compensation of the heart and promoting stasis edema. All these unfavorable influences can be prevented or at least diminished by reducing the intake of salt. It may pave the way for digitalis to work effectually. He cites a number of cases from his own experience to show the marked antiphlogistic and absorbing action of a salt-poor diet. It is not necessary to exclude all salt, but merely to reduce the amount to 2 or 4 gm. of salt (30 to 60 grains), that is, about one-eighth of the amount usually considered necessary in the diet for twenty-four hours. The easiest way to introduce the salt-poor régime is to restrict the diet exclusively to milk for a few days. He believes that the therapeutic salt-poor diet will prove effectual in other conditions.

Therapeutische Monatshefte, Berlin

March, XXIII, No. 3, pp. 129-184

91 *Septic Constriction of Uterus. P. Zweifel.
92 *Iodin in Arteriosclerosis. (Jodwirkung, Jodismus und Arteriosklerose.) Erleumeyer and H. Stein.
93 Puerperal Neuritis and Paralytic Luxation of the Ilium. E. Ebstein.
94 *Transmission of Vaccine Infection. (Vakzineübertragung und deren Verhütung.) L. F. Meyer.
95 The More Recent Methods of Conservative Treatment in Gynecology. (Gynäkologische Heilverfahren.) E. Kaufmann.
96 Influenza Otitis. Klau. Commenced in No. 2.
97 *Dosage of Formaldehyd. P. Fleissig. Commenced in No. 2.
98 Removal of Foreign Bodies in Nose. The Spoon Sound. (Fremdkörper der Nasenhöhle und ihre Entfernung mittels der Löffelsonde.) F. Müller.

91. **Tetanus of the Uterus.**—The condition of general tonic contraction known as tetanus of the uterus is generally ascribed to too early use of ergot, repeated examinations or rough manipulations, but Zweifel presents evidence to prove that it is due to local infection and should more appropriately be called septic constriction of the uterus. The putrid odor of the secretions in all the cases on record confirms the assumption of infection. In all such cases premature rupture of the membranes occurred, without labor, and a long interval elapsed before delivery was completed. This allowed infection of the ovum and putrefaction of its contents, under the influence of which the tetanus results. In a personal case de-

scribed no ergot had been given and very little examination done, but three days had elapsed between the rupture of the membranes and protrusion of the arm of the fetus, with intense general tonic contraction of the uterus. Version was then attempted but failed, and when the child was extracted seven hours later by perforation, it was found in advanced maceration. The delay of three days after rupture of the membranes permitted ascending infection with resulting septic constriction of the uterus. It did not yield even when the patient was kept under the influence of an anesthetic for three hours. The uterus was consequently removed by the abdominal route after attempts to remove it through the vagina had failed. The woman had already borne four children and the pelvis was normal, but the malpresentation at this last childbirth, the early escape of the amniotic fluid and absence of labor contractions, cooperated in the tragic outcome. The woman was not brought to the hospital until 72 hours after the rupture of the membranes. The attending physician, Zweifel, says, should have used the inflatable bag to hasten delivery after the escape of the amniotic fluid, as unless this is speedily followed by delivery of the fetus, conditions invite infection. He advises disinfection of the vagina after too early rupture of the membranes, with a 5 to 1,000 solution of lactic acid in physiologic salt solution (equal parts lactic acid and distilled water, adding 10 c.c. of this mixture to a liter of water with one teaspoonful of salt).

92. **Importance of Iodin in Incipient Arteriosclerosis.**—Erlenmeyer and Stein emphasize the fact that the action of iodin in the organism is essentially an action of ions. The iodin ion is able to aid in the destruction of degenerated tissue and to promote the restitution of cells still alive but incapable or normal functioning. These properties of the iodin ion explain the durable effect of an energetic course of treatment with iodids. If the effect were due solely to the chemical action of the iodin salt, the previous condition would recur when the last molecule of iodin had left the organism. The arguments and evidence presented confirm the necessity for progressively increasing the dosage of the iodin. The iodin ion exerts a stimulating action to which the organism soon becomes accustomed and ceases to respond unless the amount introduced is progressively increased. When this stimulation has been kept up long enough to start the cells well on the way to complete restitution, they can travel the rest of the way unassisted. In arteriosclerosis, a small uniform dosage does no good whatever, but large and progressively increasing doses may accomplish wonders in the incipient cases. Patients long taking about 7.5 grains of potassium iodid two or three times a day without the slightest benefit, soon show progressive improvement when 60 or 75 grains of iodin salts are taken during the day. Severe symptoms of iodism are observed only when the iodin salt is split up by the acid in the stomach. The large doses cause no serious disturbance if the diet is regulated to avoid acids. The acid in the stomach must be neutralized with an alkali, especially at first. For twenty-four hours before commencing the course of iodin treatment the stomach should be rendered alkaline by the use of alkaline mineral waters, and sodium bicarbonate should always be incorporated with the iodids, preferably in the proportion of one part of the bicarbonate to two parts iodid. Much larger amounts of ions are realized when two or three iodids are combined in a single dose, and equal parts of sodium and potassium iodid have been found most convenient and effectual, always combined with one-half the amount of sodium bicarbonate. Wine and fruit should be avoided while taking iodids unless the ferments in the fruit have been destroyed by cooking. Milk should also be avoided on account of the liability to lactic acid formation. This assumption that the presence of acid is the *sine qua non* for the liberation of free iodin, and consequent iodism, is sustained by the benefit of treatment based on this "acid hypothesis" and the failure and threatening symptoms when it is disregarded. As iodin under all circumstances is a poison for the protoplasm, iodism is an unavoidable by-effect of the action of the iodin ions, but the severe manifestations are easily prevented by observing the above precautions. Iodism should not be feared and measures to annul or suppress it entirely are superfluous. Durable benefit depends on a prolonged course of treatment with progressively increasing doses.

94. **Prevention of Transmission of Vaccine.**—Meyer insists on the necessity for refraining from vaccination when there is a child with eczema in the environment. He further insists on the importance of protection of the vaccinated area with a cover of cotton wrapped in medicated gauze and fastened to the surrounding skin with adhesive plaster. This protects against contamination and against infection of others while allowing free ventilation of the spot. He adds that a dressing of this kind should be made compulsory at every vaccination.

97. **Dosage of Formaldehyd.**—Fleissig devotes about six pages to a tabulation of forty-three cases of various affections in which formaldehyd in some form was applied to the surface of the lesion or injected into some organ or vein. He also reviews from the literature the opinions of various authors on the action of this chemical in its different forms, and shows the misconceptions liable to arise from the different modes of calculating the strength and urges the adoption of some uniform formula.

Virchows Archiv, Berlin

March, CXCV, No. 3, pp. 369-563

98 Histologic Study of Causes and Course of Transformation of Bone in Osteoplastic Carcinoma. (Knochenumbau im Karzinom.) G. Axhausen.
99 Regeneration in the Liver. (Regeneration in der Leber.) A. Carraro.
100 Inflammatory Proliferation of Epithelium in Female Genitalia. (Ueber entzündliche heterotope Epithelwucherungen im weiblichen Genitalgebiete und über eine bis in die Wurzel des Mesocolon ausgedehnte benigne Wucherung des Darmepithels.) R. Meyer.
101 Glioma in the Nose. (Nasengliome.) L. Süssenguth.
102 The Ganglion Cells in Sunstroke. (Die Ganglienzelle bei der Insolation.) A. Amato.
103 Regeneration of Severed Pancreatic Ducts. (Ueber die anatomische und functionelle Wiederherstellung der unterbundenen und durchschnittenen Pankreasausführungsgänge.) A. Visentini.

Wiener klinische Wochenschrift, Vienna

March 11, XXII, No. 10, pp. 327-362

104 Tuberculosis in Children. (Tuberkulose des Kindersalters.) H. Albrecht.
105 Influenza Conjunctivitis. R. Possek.
106 Production of Antigen for Serodiagnosis of Syphilis. (Zur Frage der Herstellung von syphilitischen Antigenen.) N. A. Tschernogubow.
107 Simplification of Serodiagnosis of Syphilis. (Vereinfachung der Komplementbindungsreaktion bei Syphilis.) H. Hecht.
108 Treatment of Tuberculosis. A. Krokiewicz. Commenced in No. 9.

Zeitschrift für Geburtshülfe und Gynäkologie, Stuttgart

LXIV, No. 1, pp. 1-223. Last indexed February 27, p. 744

109 *Secondary Carcinoma in the Uterus. H. Offergeld.
110 Imperforate Vagina. (Zur Klinik der Gynatresien.) E. Gross.
111 *Experiences with Pubiotomy. (700 Hebosteotomien.) A. Schläfli.
112 The Opsonic Index in Pregnancy and the Puerperium. (Ueber die klinische Verwendung der Opsonine bei Schwangeren und Wöchnerinnen.) H. Guggisberg.

109. **Secondary Carcinoma of the Uterus.**—Offergeld has been able to find 22 cases on record of a secondary carcinoma in the uterus, and he calls attention to the fact that in 3 of these cases the woman was pregnant. This suggests that the change in the metabolism in the gravid uterus upsets the balance which seems to ward off metastasis from cancer elsewhere. The secondary carcinoma develops with unusual rapidity in the pregnant uterus, while otherwise it grows very slowly.

111. **Seven Hundred Pubiotomies.**—Schläfli reports 8 cases from von Herff's clinic at Basle and reviews 510 cases from the literature with mention of nearly 200 more of which the details are not so completely given. The mortality for 664 cases was 32 with an operative mortality of 4.82 per cent. for the mother and of 9.18 for the children. The bladder was injured in 12.35 per cent. of 510 cases, and there was a febrile puerperium in 31.76 per cent. and permanent incontinence of urine in 5 women, that is, in 4.17 per cent. of 120 women re-examined later. He regards pubiotomy solely as an emergency operation when the disproportion between the pelvis and the child's head is found to be insurmountable.

Zentralblatt für Chirurgie, Leipsic

March 6, XXXVI, No. 10, pp. 329-368

113 *Plastic Operation on Abdominal Wall. (Ueber Muskelplastik bei Defekten der Bauchpresse.) L. K. Spischarny.
114 *Improved Technic for Suturing the Bladder. (Blasennaht mit tiefen Knopf- und oberflächlichen Schnürnähten.) v. Hacker.

113. **Plastic Operations on the Muscles for Defects in Abdominal Wall.**—Spischarny remedies the defect by means of the oblique muscle taken from the side wall of the chest and the part below the costal arch, as he describes in detail, with reports of five cases in which this technic was successfully applied. The defect resulted from the removal of a large tumor in the rectus muscle, actinomycosis in the abdominal wall, or excessively large hernia.

114. **Suture of the Bladder.**—Hacker has found that a combination of button sutures in the lower tier and a row of small tobacco bag sutures above forms a particularly strong method of closing the bladder wall. He illustrates the method as applied to a transverse incision.

Zentralblatt für Gynäkologie, Leipsic

March 6, XXXIII, No. 10, pp. 329-376

115 *Suture of Recent Laceration of Perineum. (Zur Naht des frischen Dammrisses.) W. Sigwart.
116 *Importance in Obstetrics and Gynecology of Momburg's Method of Expelling Blood from Lower Half of Body. (Bedeutung der künstlichen Blutleere der unteren Körperhälfte für die Geburtshilfe und Gynäkologie.) O. Hoehne.
117 Four Cases of Resection of Ovaries according to Menge's Technic. (Zur Ovarialresection n. Menge.) P. Zacharias.
118 Treatment of Placenta Prævia. V. Zimmermann.

115. **Suture of Lacerated Perineum.**—Sigwart states that primary healing was the rule in all but 2 out of 125 cases of lacerated perineum in which the suture was completed with the Michel clips. They seem to be peculiarly adapted for lacerations in the perineum as they leave no stitch holes to become infected.

116. **Expulsion of the Blood from the Lower Half of the Body in Obstetrics and Gynecology.**—Hoehne has been experimenting with the Momburg technic and states that it has the advantage over isolated compression of the abdominal aorta in that the ovarian artery is compressed as well. The conditions are peculiarly favorable for it in obstetric cases, as the intestines then are crowded into the upper part of the abdomen. Various operations in the abdomen and even incision of the exposed aorta caused no bleeding in the rabbits thus belted in. The method was applied in two cases in the clinic in which hemorrhage persisted from atony of the uterus after delivery. The anemia of the organ thus induced stimulated it to energetic contraction at once, while the circulation in the most vital organs was strikingly improved as shown by the improvement in the radial pulse, the quieter breathing and the subsidence of the anemia in the brain. He emphasizes the absolute harmlessness of the procedure and the certain success of the hemostasis. The communication issues from Pfannenstiel's clinic at Kiel; in one of the two cases reported violent pains were felt afterward in the legs for three hours which then subsided without a trace. He does not know whether to ascribe these pains to the belting in or to the preceding winding of the legs to expel the blood, but in any event he comments that it is wise to follow Momburg's directions, that is, not to draw the belt too tight, but merely enough to arrest the pulse in the femoral artery. This is the first by-effect that can possibly be ascribed to the measure that has been reported. The intestines and the ureters do not seem to suffer from the compression, but the question of possible injury to the wall of the inferior vena cava and eventual danger of thrombosis requires study. No tendency of the kind was observed in the rabbits. The method seems to promise a brilliant future in prevention of hemorrhage with placenta prævia, as it dispenses with all intragenital measures. It may even do away with the necessity for manual separation of the placenta, he adds, as the more energetic contractions of the anemic uterus may render it unnecessary. He adds in conclusion that it is possible that this method may also aid in starting an artificial abortion by the effect on the uterus of thus cutting off its blood supply.

Policlinico, Rome

March 7, XVI, Practical Section, No. 10, pp. 293-324

119 Positive Complement-Fixation Test in Malta Fever. (La deviazione del complemento nella febbre di Malta.) G. Pulvirenti.

February, Medical Section, No. 2, pp. 49-96

120 *Lipemia and Diabetic Lipoidemia. C. Frugoni and G. Marchetti.

March, No. 3, pp. 97-144

121 Familial External Ophthalmoplegia. (Oftalmoplegia esterna cronica familiare.) A. Nazari and P. Chiarini.
122 Experimental Lesions in the Liver of Splenic Origin. (Lesioni epatiche sperimentali di origine splenica.) G. Breccia.
123 *Case of Hydatid Cyst in the Heart. (Caso di echinococco del cuore.) B. Baecchi.
124 *Sphygmodynamometer. (Sfigmodinamometro.) S. Salaghi.

February, Surgical Section, No. 2, pp. 49-96

125 Traumatic Separation of the Epiphyses. (Sui distacchi traumatici epifisari.) A. Pennisi.
126 Independence of the Liver Territory. (Sull'indipendenza dei territori epatici.) S. Gussio.

120. **Lipemia and Diabetic Lipoidemia.**—The lipemia and lipoidemia—as the presence of cholesterin and lecithin in the blood is called—were so intense in the case described that the authors regard it as unique in this respect. The patient was a boy of 13; the first symptoms of trouble developed four months before he entered the hospital where he died in less than a month. The cerebrospinal fluid was also rich in fat, but nothing was found at autopsy to indicate an embolic process anywhere. The clinical manifestations were those of typical pancreatic diabetes, but the pancreas was found apparently sound. The urine during life contained 3.5 gm. of fat granules in the twenty-four hours—0.875 per thousand—and 270 per thousand of the ethereal extract of the blood was also fat. The literature on the subject of diabetic lipemia, and its probable origin in some general metabolic disturbance are reviewed and discussed.

123. **Hydatid Cysts of the Heart.**—Baecchi reports a case and compares it with fifty-eight others of which he has found records in the literature, including 15 cases with multiple cysts. There was no eosinophilia to aid in the diagnosis, but there was remarkable exogenous proliferation of the cyst.

124. **Sphygmodynamometer.**—Salaghi gives an illustrated description of the instrument which combines a sphygmomanometer and an apparatus to measure the velocity of the blood current. It is very simple, merely a broad cuff separated into three lengthwise parts, the outer two serving to measure the arterial pressure and the inner the velocity; three tubes connect the cuff with the standard manometer. He gives a number of tracings to show the findings in various conditions and the important information that may be thus obtained.

Riforma Medica, Naples

March 1, XXV, No. 9, pp. 225-252

127 Unreliability of Serodiagnosis of Syphilis with Urine. (La reazione di Wassermann eseguita colle urine ha valore pratico?) G. Pollio.
128 Cutaneous Tuberculin Reaction in Bone and Joint Tuberculosis. (Valore diagnostico della cutireazione tubercolinica nella tubercolosi ossea ed articolare.) G. Impallomeni.

March 8, No. 10, pp. 253-280

129 Tumors at Base of Brain. (I tumori della base dell'encefalo.) G. Rummo. Commenced in No. 9.
130 Peculiar Changes in Cutaneous Sensibility in Hysteria. (La polarizzazione dell'anestesia isterica.) C. Calligaris.

Sei-i-kwai Medical Journal, Tokio

January 31, XXVIII, No. 1, pp. 367-372

131 Experimental Research on Opsonic Index under Ishigami's Tuberculo-Toxoidin. K. Takaki.

Nordiskt Medicinskt Arkiv, Stockholm

XLI, Internal Medicine, No. 3, Last indexed Jan. 30, p. 128

132 *Successful Roentgen-Ray Treatment in Case of Syringomyelia. I. Holmgren and O. Wiman.
133 *Laws Regulating Connection between Infectious Diseases and Specific Drugs. (Observations sur les maladies infectieuses et sur les medicaments spécifiques.) R. Ebbell.
134 *Acquired Heart Disease in Children. (Ueber die erworbenen Herzerkrankungen des Kindesalters.) G. Forssner.
135 *Case of Poisoning by the Flowers of the *Loaicera periclymenum*. (Yellow Honeysuckle.) O. Hanssen.

132. **Syringomyelia Cured by Roentgen-Ray Treatment.**—Holmgren and Wiman relate the details of a case of syringomyelia in a workman of 51 in which the Roentgen rays ap-

plied to the spinal cord not only arrested the morbid process, but seemed to allow restitution of the functions of the nerve tract involved. The effect is evidently due to direct local action on the pathologic process in the spinal cord, as the improvement involved only the regions innervated from the part of the spinal cord exposed to the rays. The most important effect was the resurrection, he says, of the functions of the hands and fingers. The improvement has persisted to date, nearly two years, and the patient has gained over 25 pounds in weight. The rays may serve to differentiate anesthetic leprosy from syringomyelia in some cases.

133. **Infectious Diseases and Specific Remedies.**—Ebbell comments on the wide difference in respect to the action of drugs between the diseases caused by vegetable micro-organisms and those caused by micro-organisms belonging to the animal kingdom. There does not seem to be any essential difference between the diseases caused by these two groups, he remarks, except in respect to the response to drugs. The animal germs can be destroyed or their development arrested by certain drugs administered internally in doses too small to affect the patient, but the vegetable germs are far more resistant. Dosage strong enough to act on them would kill the patient before the parasites succumbed. According to this law there is no specific remedy for bacterial diseases, and experience to date seems to show that it is useless to seek for such. The efforts in this line should be abandoned, Ebbell declares, and attention concentrated on serotherapy which has already given promising results. If a disease yields to a certain remedy its protozoan origin is thus established. Further research will certainly reveal still more powerful specific remedies for this class of infections.

134. **Acquired Heart Affections in Children.**—Forssner's article won for him the Alvarenga prize. It is based on 47 cases that came to autopsy and 27 other fatal cases. He remarks that in 45 of the 74 cases in children and in 32 of 60 cases in adults the acquired heart affection was the result of acute articular rheumatism. He classifies and tabulates this material, remarking that the 74 cases of fatal heart affections were encountered among 6,602 children in the clinic during the last twelve years. The article is not concluded in this number.

135. **Poisoning from Honeysuckle Flowers.**—A two-year-old boy swallowed some flowers of the yellow honeysuckle and in an hour manifested symptoms of severe poisoning, principally drowsiness, languor, congestion of blood in the head, diarrhea, convulsions and perspiration so violent that the bed clothes were wet through and through, as the spasms abated a little at the end of the eight hours. A few hours afterward the child fell asleep and for several days was peevish and inert with irregular evacuations. The violent perspiration recalls the ancient use of the honeysuckle as a diuretic and diaphoretic. A few cases are on record of the poisoning of children by the fruit of the *Lonicera xylosteum*.

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136 *Tumors in the Nerves and Neurofibromatosis. (Om svulster i nerverne og multipel neurofibromatose.) F. Harbitz.

137 *Extension in Ambulant Treatment of Fracture of the Arm. (Den ambulatoriske extensionsbehandling paa overextremiteten.) O. Borchgrevink.

136. **Tumors in the Nerves and Neurofibromatosis.**—In this first installment of his article, Harbitz relates more or less of the details of 21 cases, including 12 of a solitary tumor in the nerves, 4 of a tumor in the optic nerve, 2 of multiple tumors, fibromas, on nerves, and 2 of a diffuse sarcoma in the cauda equina. His experience includes a still larger number of tumors in the nerves, but the clinical details are lacking of some of the others, so he does not include them in his list. He here discusses the pathologic anatomy of tumors involving nerves, and defines the affection known as multiple neurofibromatosis, giving its history.

137. **Extension in Ambulant Treatment of Fracture of the Arm.**—Borchgrevink shows in nine illustrations the special devices which he has found extremely useful in applying extension to a fractured arm while allowing the patient to be up and about. In 450 cases in the last six years the devices have given constant satisfaction, the Roentgen rays showing in the large majority that the results were as good as could have been obtained with suture of the bone.

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January 28, LXXI, No. 4, pp. 77-106

138 Diagnosis of Destruction of the Labyrinth. P. Tetens Hald.

Books Received

All books received are acknowledged in this column and such acknowledgment must be regarded as a sufficient return for the courtesy of the sender. A selection will be made for review in the interests of our readers and as space permits.

CONSERVATIVE GYNECOLOGY AND ELECTROTHERAPEUTICS. A Practical Treatise on the Diseases of Women and their Treatment by Electricity. By G. Betton Massey, M.D., Attending Surgeon to the American Oncologic Hospital, Philadelphia. Edition 6. Cloth. Pp. 462, with illustrations. Price, $4. Philadelphia: F. A. Davis, 1909.

AN EXPERIMENTAL STUDY OF SLEEP. (From the Physiologic Laboratory of Harvard Medical School and Sidis' Laboratory.) By Boris Sidis, M.A., Ph.D., M.D., Author of Psychopathologic Researches in Mental Dissociation. Paper. Pp. 106. Price, $1. Boston: Richard G. Badger, 1909.

THE PRACTICAL GUIDE TO HEALTH. Designed for Nurses and for Home Use. By Frederick M. Rossiter, B.S., M.D., Author of "The Story of a Living Temple." Cloth. Pp. 637, with illustrations. Price, $3. Washington, D. C.: Review & Herald Pub. Assn.

SELF-CONTROL AND HOW TO SECURE IT. By Dr. Paul Dubois, Professor of Neuropathology in the University of Berne. Cloth. Pp. 337. Authorized Translation by Harry Hutcheson Boyd. Price, $1.50. New York: Funk & Wagnalls Co., 1909.

THE PHYSIOLOGIC STANDARDIZATION OF DIGITALIS. By Charles Wallis Edmunds and Worth Hale. Hygienic Laboratory. Bulletin No. 48. December, 1908. Paper. Pp. 61. Washington: Government Printing Office, 1909.

ANNUAL REPORT OF THE SURGEON-GENERAL OF THE PUBLIC HEALTH AND MARINE-HOSPITAL SERVICE OF THE UNITED STATES. 1908. Cloth. Pp. 220. Washington: Government Printing Office, 1909.

MY LIFE AS A DISSOCIATED PERSONALITY. By B. C. A. With an Introduction by Morton Prince, M.D. Paper. Pp. 47. Price, 50 cents. Boston: Richard G. Badger, 1909.

RADEMACHER'S UNIVERSAL AND ORGAN REMEDIES. Abridged and Translated by A. A. Ramseyer. Cloth. Pp. 104. Price, $1. Philadelphia: Boericke & Tafel, 1909.

New Patents

Recent patents of interest to physicians:

913263. Ankle support and protector. H. J. Collis, Taunton, Mass.
913127. Jury and jury-frame for facilitating orthopedic treatment. G. W. Haas, Los Angeles, Cal.
913492. Massage apparatus. M. A. Haines, Cleveland, Ohio.
913297. Medical apparatus for injecting purposes. K. Krautschneider, Innsburck, Austria-Hungary.
913426. Converting catechu-tannic acid. W. Osborne and H. Schupp, Munich, Germany.
913559. Pasteurizing apparatus. A. A. Pindstofte, Frederiksberg, near Copenhagen, Denmark.
913323. Sanitary washbowl. C. F. Tollzien, Salem, Ohio.
913686. Method and apparatus for atomizing and spraying oily materials. H. O. Brandt, Manchester, England.
913688. Respirator. W. Buckien, Jr., Marble Rock, Pa.
914295. Eye-cup. C. A. Maher, Ottawa, Ill.
913836. Sanitary bed-pan. M. B. Morgan, New York, N. Y.
913910. Pasteurizing apparatus. J. T. H. Paul, Chicago, Ill.
913983. Catamenial receptacle. P. J. Scheller and N. I. Haas, Evansville, Ind.
913855. Suspensory sack or pouch. H. C. Shaw, Chicago, Ill.
913989. Obstetrical apparatus. B. H. Simpson, Noblestown, Pa.
914785. Invalid's supporter. E. I. Boyce, New York, N. Y.
914644. Obtaining animal serum. R. H. Deutschmann, Hamburg, Germany.
914935. Poultice case or container. H. J. Dunn, Oakland, Cal.
914950. Syringe. J. R. Harris, Raton, New Mex., Ter.
914576. Respirator. G. F. Jaubert, Paris, France.
914725. Sputa-cup and holder. F. C. Jonah, Boston, Mass.
914871. Syringe. H. F. Ong, Portland, Ore.
915000. Deodorizing and disinfecting device. A. G. Walter and B. M. Inman, Fremont, Ohio.
914623. Manufacture or generating-plates for X-ray machines. H. H. Williams, Chicago, Ill.
914544. Disinfecting apparatus. V. A. Williams, Sedalia, Mo.
915329. Sphygmomanometer. L. F. Bishop and R. Grace, New York, N. Y.
915561. Capsule filling machine. T. P. Curry, Danville, Ky.
915197. Vibratory massage apparatus. C. O. Lindstrom, Chicago, Ill.
915315. Massaging implement. O. N. Tevander, Chicago, Ill.
915127. Obstetrical appliance. M. H. Topping, Flat River, Mo.
915251. Massage device. J. Vanderslice, Montreal Annex, Canada.
915646. Atomizer. E. J. Worst, Ashland, Ohio.